PUBLIC EXPENDITURE AND TAXATION IN JORDAN, 1954-1979

By

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A Thesis Submitted for a Ph.D. (Economics)
Degree at The University of Keele,
January, 1982

ABSTRACT

Jordan is a developing country which, ever since it was established, was and still is dependent on foreign aid for its survival. The availability of foreign aid may have led to ignoring the need for developing its fiscal system to sustain the economic and social development achieved. Such a relaxation in government attitude undermined the role of fiscal policy as a means of achieving the macroeconomic objectives, be it economic growth that is more dependent on the mobilization of domestically generated resources; its role in a stabilization program; or as a vital tool in securing better distribution of income and wealth among the different segments of society.

The main objectives of this thesis are to analyse the structure and performance of revenues and expenditures and examine whether their operations have been consistant with the country's development strategy. We hold the view that revenue and expenditure policies lie at the heart of national economic and social development. Revenue policies determine the magnitude of the resources available to support government programs and to finance economic development, as well as the relative burden to be borne by the various segments of society in providing these resources. Expenditure policies determine the allocation of available financial resources of the various components of government, reflecting national economic and social objectives and priorities. Together, they constitute the core of government efforts to direct the development of the country so as to achieve national development.

Accordingly, the study investigates three main areas of interest, that is, (a) Analyzing the structure and performance of different components of the fiscal system; (b) Assessing their growth in the context of economic development and (c) Specifying certain desired policy and procedural changes where fiscal innovation may take place to improve the effectiveness of the system and to enlarge its contribution to development objectives.

ACKNOWLEDGMENTS

On finishing this thesis I am most grateful to my supervisor Dr. L. Rosenthal for his valuable advice and constructive criticism. I am also grateful to Professor L. Fishman for his encouragement and help in times of hardship. Special thanks to Dr. Albert Butros and Dr. Bassam Sakit of the Royal Scientific Society for their numerous instances of help and encouragement. I also wish to thank Dr. S. Khasawneh, lately Director of the Income Tax Department, whose cooperation is much appreciated. Thanks are also due to Dr. Abdullah Nassur and Mr. Khalid Al-Saber of the Ministry of Finance for their assistance in the collection of data used in this study. Miss Gabrielle Bull of the British Council (London) was of great help and understanding to whom I am thankful. Thanks are also due to Mrs Barbara Haywood for typing the manuscript.

This work would not have been completed without the patience and continuous encouragement of my wife, Alfat, and the occasional pleasant distractions of my son, Yazan. My greatest gratitude, however, is due to my parents, for their unending help, encouragement and dedication to my education, to both of whom I will always be indebted.

M. A. Smadi

Keele, October, 1981.

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CHAPTER ONE

POST INDEPENDANCE DEVELOPMENT CONSTRAINTS AND PROCLIVITIES

1.1. The Political and Economic Setting Prior to 1954

Early in the sixteenth century and up to the First World War, the area which ultimately became Jordan constituted the Syrian province of the Turkish Ottman Empire. The Ottman reign however, began to decline early in this century. The most important effect of this decline was eventually the disappearance of central authority which deteriorated security in the area. By 1918, when the Ottman Empire was defeated, Great Britain assumed reponsibility for the region.

Present-day Jordan first emerged as a political entity in 1921, when Great Britain sub-divided into two parts the territory included in the mandate for Palestine that it had received from the League of Nations.

In 1921, the Arab Emirate of Transjordan was established on the East Bank of the Jordan River. In May 1923, Great Britain formalized this arrangement, recognizing Transjordan as an entity and an autonomous power. The West Bank, however, was retained under the direct administration of Britain. In 1946, the British mandate ended, and the Hashemite kingdom of Transjordan was officially proclaimed, hence, full independnace and sovereignty over its territory was achieved. After the 1948 war which resulted in the de facto partition of Palestine and the creation of Israel, the part of Palestine which was retained in the hands of the Arabs was incorporated into the country in April 1950, forming the re-named Hashemite Kingdom of Jordan.

Unlike many present LDC's, Jordan has a unique history mainly characterized by a mixed colonial background. Jordan's geo-political situation made it subject to political upheavels in the area which brought about vast adverse effects manifested themselves in certain

economic irregularities to be discussed later in this chapter. Furthermore, it is argued that this unique historical background made the process of internal integration rather hard to achieve as a result of consecutive disintegrating factors which, had, and still have, their direct adverse effects on the economy of the country.

Jordan possessed the rather negative advantage of beginning from a low level of development. Per capita net national product in 1953 was probably not much more than U.S. $ 100, just a little less than that of Egypt at the time (about $ 120), but above that of India ($ 60) and Pakistan ($ 70)[1].

Furthermore, as a newly established developing country, Jordan inherited insurmountable problems arising out of the events of 1948. In the late 1940's the population of Transjordan was estimated at 300.000.[2] Within a few months, the population was trippled without a corresponding increase in resources of the same size or extent. Such a vast increase in population, however, resulted in high unemployment, associated with a dependancy rate of about 5 to 1.

The economy of Jordan was predominantly agricultural at the time of the country's creation. It was estimated that 75 percent of the non-refugee population depended on agriculture or animal husbandry for their livelihood, a rather high percentage, and the greatest part of domestically produced income was derived from these two sources[3]. However, the sector

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1 Charles A. Cooper & Sidney S. Alexander, (eds.), Economic Development and Population Growth in the Middle East, (New York : American Elsevier Publishing Co. Inc., 1972), p 213.

2 Oddvar Aresvik, The Agricultural Development of Jordan, (New York : Preager Publisher, 1976), p 1.

3 Raphael Patai, The Kingdom of Jordan, (Princeton : Princeton U. Press, 1958), p 119.

depended heavily on scarce and unevenly distributed rainfall, which again is a limiting factor for cultivation, not to mention the scarce supply of irrigation water. Among the field crops, wheat and barley were the main rain-fed grown crops. Grapes, olives and tobacco were the other principal crops. Production was handicapped by the application of primitive methods of cultivations, the inadequate transport system, the absense of mechanization and the unavailability of fertilizers.

Jordanian endowment of basic resources was meager, except for the large deposits of phosphate rock and salt. Manufacturing industry was practically non-existent. Whatever small-scale industries, if any, were limited to a few food processing plants, particularly flour milling, along with small handcrafts, mainly house produced.

With its vast population increases and low per capita income, associated with the state of tension arising out of the Arab-Israeli war, Jordan provided a small market, thus hindering new private investments which resulted in a handicapped manufacturing industries.

Meanwhile, the forgoing discussed situation resulted in a low economic activity during the British mandate. Hence, Jordan relied heavily on imports of consumer, as well as capital goods to satisfy the growing consumer needs. Exports were mainly composed of agricultural products, particularly field crops. Furthermore, the country was faced with high transportation costs as a result of re-routing its trade directions to Beirut via Damascus or to the Port of Agaba the only sea outlet.

By and large, it may be argued that the political instability and its resultant factors arising out of the 1948 events affected almost every aspect of life in Jordan. Demographic and economic effects will be singled out however, and their implications on the various economic sectors will be discussed in the respective sections of the present chapter.

However, economists differ in their explanation of the process of economic development as well as the criteria they employ in their analysis of such development. A number of recent studies[4] analyzing certain aspects of Jordan's development process concentrated on the structural imbalance associated with Jordan's economic development, the orientation of the economy towards the services sector in particular.

Taking this into consideration, it is the objective of this chapter to give a fairly complete analysis of the resultant structure and performance of the economy. It will be argued, however, that Jordan accomplished a remarkable development by most standards, in comparison with countries in the same level of her per capita income and population. For example, the average growth of domestic product per capita between 1960 and 1968 was for Syria 4.1, Lebanon 4.6, Israel 7.1, Iraq 4.3, Egypt 4.3 and for Jordan 6.7 per cent[5]. This development and growth attainment came about through the effort of the Jordanian people themselves supported by considerable help from Arab and friendly nations in the West, particularly the United States, Britain and West Germany. However, time has come for Jordan to develop and mobilize her own domestic resources if this pace of economic development and growth is to be sustained.

Within this framework, and as was mentioned above, the implications of the arising conditions on the population and labour force will be discussed first, and then the effects on the respective major sectors of the economy and the main economic indicators will be dealt with in subsequent sections.

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4 A representative sample might include:
Zuhair A.R. Khalifeh, Economic and Commercial Aspects of the Phosphate Rock Industry in Jordan and it's Relation to World Production and Trade in Phosphate. An unpublished Ph.D. thesis, Keele Univ., 1978, Ziad M. Fariz, The Role of Foreign Trade in the Economic Development of Jordan. An unpublished Ph.D. thesis, Keele Univ., 1978; Bassam K. Sakit, Foreign Aid to Jordan (1924-25/1972-73) Its Magnitude, Composition and Effect, An unpublished Ph.D. thesis, Keele Univ. 1976; Michael P. Mazur, Economic Growth and Development in Jordan, (London: Groom Helm Ltd., 1979).

5 United Nations, Statistical Yearbook, 1972. (New York: U.N. Publications, 1973), Tables 137 and 186.

1.2 Population and Labour Force

The aforementioned political situation resulted in drastic population changes. Within sixteen years 1951-1967, the population of Jordan was united once as a result of a war (1948) and further divided and separated as a result of a war (1967). In 1946 the population of Jordan was estimated at 300.000 persons, increased to 1.39 million in 1954. Such an increase was mainly due to the influx of refugees estimated at 350.000 persons after the 1948 events, along with 460.000 persons the inhabitants of the West Bank.

Since the country was established, only two censuses have been carried out. The first took place in 1952, and was an extended census of housing, where coefficients of occupation were used to estimate the national population. The second census was carried out in 1961 which was the only full census of population, however it embodied several deficiencies, the most important of which is that the army's personnel were excluded.

Crude death rates in Jordan have been under-estimated[6]. However, to correct this unreliable data, the Department of Statistics suggested a 47 per thousand birth rate coupled with a 16 per thousand death rate which eventually resulted in a 3.1 per cent estimate for the annual population growth rate[7].

Furthermore, during the period under consideration the urban/rural distribution of the population was subject to a perceptible change.

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6 Crude death rates were underestimated because many death cases, especially in rural areas, were not recorded.

7 Department of Statistics, Analysis of the Population Statistics of Jordan. (Amman: Department of Statistics Press, 1966).

As (Table 1.1) demonstrates, about 52 per cent of the East Bank's population was in urban areas and 42 per cent in rural areas. However, by 1972 a considerable change had occured so that 79 per cent lived in urban areas along with 21 per cent in rural areas[8].

Table (1.1)

Percentage Distribution of Population by Sex and Mode of Living in the East Bank.

Sex	Mode of Living[9]						
	1961 %				1972 %		
	Urban	Rural	Scattered	Total	Urban	Rural	Total
Male	53.4	50.7	51.2	52.0	51.0	51.6	51.0
Female	46.6	49.3	48.8	48.0	49.0	48.4	49.0
Total	51.5	39.5	9.0	100.0	79.0	21.0	100.0

Source : A. Steitieh, et. al., Population, Employment, and Economic Development of Jordan, (Amman : Jordan/FAD/UNFPA PO2, 1978) Table A-Z, P70.

Several factors together gave rise to the aforementioned population distribution. Firstly, the concentration of production activities in

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8 The Jordan's - Department of Statistics definition of "Urban" refers to towns with 10.000 inhabitants. The refugee camps within cities were considered part of the urban centers. "Rural" the rest of the population gatherings.

See Jordan - Department of Statistics, The Multi-Purpose Household Survey, January - April, 1976. (Amman: Department of Statistics Press, June 1977) p, 2.

9 The 1961 estimates were based on the 1961 population census which was relatively urbanized, while the 1972 estimates were based on the January - April Multi-Purpose Household Survey, 1972.

certain urban areas particularly in the Amman-Zarka area which gave rise to rural-urban migration. This internal migration however, could be divided into two main streams: a) forced migration due to the Arab-Israeli wars of 1948 and 1967 which resulted in a large masses of population moving from one location to another. This direction of settlement again resulted in an over populated Amman-Zarka area. In 1972, for example, the population of Amman was estimated at 550.000 persons, whereas in 1967 Amman had a population of 320.000 and the other two principal towns, Zarka and Irbid, 213.000 and 110.000 respectively. Hence the Amman-Zarka area had about 43% of the population of the East Bank which was estimated at 1.774.000 in 1972[10]. and b) Rural-urban migration caused primarily by economic and social factors. Mazur noted in this respect that between 1952 and 1961, while the total population grew at an annual average rate of 2.8 per cent, the rural population averaged 1.4 per cent annual growth rate and the urban population 5.0 per cent[11].

Secondly, this internal migration was further enhanced by Jordanians who left the country to work, particularly in the neighbouring Arab oil-producing countries. This kind of migration further manifested itself in the Jordanian economy after the oil price boom in 1973, which eventually led to an increased economic activity in these countries leading to a vast demand for Jordanian as well as labour from other countries.

Unfortunatly, the existing statistics on labour force and employment are not up-to-date. As was noted earlier, the last population census was carried out in 1961, and there is no accurate information of subsequent

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10 Kingdom of Jordan, Jordan 1973 - A brief survey. (Amman : Ministry of Culture and Information, n.d.), p.5

11 Michael P. Mazur, op.cit., p.28

population movements. Nevertheless, estimates comparing the sectoral distribution of labour force[12] indicate a decline in the proportion of labour force working in agriculture from 38 per cent in 1961 to 18 per cent in 1975; an increase in the proportion of those working in the mining and industry remained the same standing at 19 per cent.

Migration to the oil-producing countries was estimated to be between 150.000 to 200.000. Although this migration has substantially increased Jordan's foreign exchange earnings from remittances, it caused however, acute shortages in key sectors of the economy. These have been satisfied by importing labour. It has also exerted strong internal pressures on wages and prices.

The government continuously attempted to alleviate the adverse effects of this outward movement of labour by encouraging the setting up of vocational training; it encouraged the formation of cooperative housing societies that offer prospective home owners loans on favourable terms; a social security law was enacted in 1978 and social security fund was subsequently established in 1979; the opening of cooperative shops for government employees to buy items at reduced prices, and finally encouraging more females to participate in the labour force.

Having briefly discussed the population and manpower situation, consideration will now be given to the implications on the economic structure and performance of the economy during the period 1954-1967 with particular emphasis given to the agricultural and industrial sectors.

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12 Hanna S. Odeh, Economic Development of Jordan, 1954-1971, (Amman : Ministry of Culture and Information, n.d.) p.2, see also, National Planning Council, The Three Year Development Plan, 1973-1975. (Amman : 1972).

1.3 Economic Structure and Performance Prior to 1967

1.3.1 National Income and Expenditure.

Economic development has been defined[13] as the process whereby a country's real per capita national product (GNP) or income increases over a sustained period of time through continuing increases in per capita productivity[14].

To assess the general performance of the economy over any one period it is natural to examine the main indicators, namely, the growth trends in the gross national product, the gross domestic product, and per capita national income.

As was alluded to earlier, Jordan achieved significant development and growth during the period 1954-1966. This is evident when growth trends in GNP are traced. Gross National Product grew at an average annual growth rate of 11.8 per cent, increased in absolute terms from JD 52.4 million in 1954 to JD 130.8 and JD 185.7 million in 1962 and 1966 respectively, an increase of 254 per cent of the whole period of 12 years, (Table 1.2) Though these figures are in current prices, yet it is well in mind that during the said period Jordan enjoyed a price stability i.e. inflation rate did not exceed the 2% level.

While total consumption grew by 10.5 per cent gross capital formation grew by about 13.2 per cent. Furthermore, total export of goods and services grew by almost 15.3 over the 12 year period, increasing from only JD 6.1 million in 1954 to JD 32.1 million in 1966. However, exports were concentrated into few items such as phosphate, fruit and

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13 For the purpose of this thesis, it is felt that this is an acceptable definition frequently employed in the literature, however, there are conceptual and practical problems with it.

14 Dominick Salvatore and Edward Bowling, Theory and Problems of Development Economics. (New York, McGraw Hill Book Co., 1977)

Table (1.2)

Gross National Product and Its Components

(at current prices)

Components \ Period	1954	1959	1962	1964	1966	Growth of 1966 over 1954	
						Total	Annual
i) Consumption Expenditure	59.1	112.6	131.4	155.7	187.0	216	10.5
ii) Gross Capital Formation	5.9	12.4	20.2	25.3	28.4	381	13.2
iii) Exports of Goods and Services	6.1	11.79	19.08	24.57	32.06	426	15.3
iv) Imports of Goods and Services	19.8	43.37	51.80	56.65	76.60	287	10.7
v) Net Factor Income from Abroad	1.1	5.6	11.93	11.67	15.15	1277	24.4
vi) Gross National Product	52.4	99.13	130.83	160.62	185.65	254	11.8

Source : i) Hanna S. Odeh, Economic Development of Jordan, 1954-1971 (Amman : Ministry of Culture and Information, n.d.).

ii) Department of Statistics, National Accounts, 1959-1967. (Amman : Department of Statistics Press, 1968).

vegetables. Total imports of goods and services, on the other hand, increased considerably in gross terms from JD 19.8 million in 1958 to reach about JD 77 million in 1966, an annual growth rate of 10.7 per cent.

Most growth in the GNP components took place in the net factor income from abroad, which increased from as low as JD 1.1 million in 1954 to about JD 15.2 million in 1966, a growth rate of 24.4 per cent annually. This vast growth rate came about as a result of an increased number of Jordanians working in the oil producing Arab countries and thus reflected an increased amount of remittances.

Gross Domestic Product grew at an annual average rate of 11.3 per cent. It increased from JD 61.7 million during the period 1954-1958 to reach about JD 154.1 million in the 1963-1966 period, an increase of 232.7 per cent over the whole period of thirteen years. This is a higher rate of growth than is to be found in almost any other country with the same level of development[15].

This level of growth occured while the price level has apparently remained remarkably stable during a period in which other countries have experienced serious inflationary pressures[16]. However, available data suggest that growth rates were slower in the 1961-1966 period as compared with the 1954-1959 growth rates, either in GDP or in GNP.

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15 Person noted that between 1950 and 1967, the LDC's as a group increased their total production and services (GDP) by an annual average rate of 4.8 per cent. See Lester B. Person, Partners in Development (London: Pall Mall Press, 1969), p. 27.

16 National Development Board, The Seven Year Program for Economic Development of Jordan, 1964-1970. (Jerusalem-Jordan : The Commercial Press, n.d.), p.2.

Furthermore, this performance took place counter to all pessimistic opinions of those interested in the future development of Jordan at the time[17]. The World Bank sent a mission in 1955 to assess the potentialities of the economy and to formulate an economic development plan. The mission set a target rate of growth of GNP of 4 per cent, but suggested however, that even the achievement of this rate of growth would not be easy to attain, given the prevailing circumstances[18].

The examination of total resources (= GDP + Imports) and their uses reflects a relative change in the components of these resources. The ratio of gross domestic product to total resources increased slightly from 68.5 per cent during the period 1954-1958 to 70.5 per cent in 1963-1966. On the average it maintained a ratio of 69.5 per cent during the whole period. Moreover, the ratio of imports of goods and services to total resources dropped slightly from 32 per cent to 30 per cent between the same two periods. By and large, total available resources maintained an annual average rate of growth of 11.1 per cent throughout the whole period under consideration.

On the other hand, however, even though total consumption expenditures grew at an annual average rate of 10.5 per cent, its ratio to total resources showed a marked decline from 81 per cent during 1954-1958 to 76.3 per cent during 1963-1966, yet on the average it maintained a ratio of 78.7 per cent over the whole period. This tendency signifies the fact that more resources were released and channelled to capital formation over the said period. A more obvious change in the use of resources could be seen by looking at the rate of

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17 See IBRD, The Economic Development of Jordan, (Baltimore : The John Hopkins Press, 1957), also see Hamilton F. Armstong, ed. "Survey No. 2. Lebanon, Jordan and Iraq," Foreign Aid Program, Compilation of Studies and Surveys, 85th cong. 1st sess. (Washington, D.C.,: Gov. Printing Office, 1957).

18 Ibid., p.1

growth of gross capital formation which grew at an annual average rate of 19.2 per cent. Its ratio to total resources increased from 9.6 per cent in 1954-1958 to 11.6 per cent in 1963-1966, further the ratio of GCF to GDP increased also from 14.0 to 16.4 per cent between the same two periods. Table 1.3.

On the other hand, the examination of the sectoral contribution to GDP reveals a similar structural change among the main sectors of the economy. The contribution of the agricultural sector to GDP declined from 29.8 per cent to 16.4 per cent in 1960 and 1966 respectively, averaging about 21 per cent over the whole period 1954-1966, Table 4.

The industrial sector[19] by contrast evidenced steady development. It's share in GDP increased from 8.8 per cent in 1954 to about 13 per cent in 1966, therefore averaging 10.2 per cent over the thirteen year period.

Moreover, this structural change resulted in a gradually increased importance of the services sector[20], within which the share of the construction and transportation sub-sectors in GDP increased markedly due, among other things, to the need for housing resulted from the influx of refugees after the 1948 events, associated with the government's expenditures being concentrated in the development of infrastructural base, roads and transportation in particular.

The influx of refugees which was estimated at 350.000 persons, coupled with the 460.000 inhabitants of the West Bank, led to higher demand for consumer goods which could not be met by domestic production, thus providing a potentially larger market as well as allowing for more imports of consumer and capital goods which helped the establishment of new small-scale industries.

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19 The industrial sector is composed of the Mining, Manufacturing and Electricity sub-sectors.

20 The Services sector is composed of the Construction, Transport, Trade and Banking, ownership and doweling, Public Administration and Defence and other services sub-sectors.

Table (1.3)

Resources and their uses at domestic prices 1954-1966

(in JD million)

Period	GDP		Total Imports		Total Resources	Consumption		Gross Capital Formation			Exports	
	Value 1	% of T.R. 2	Value 3	% of T.R 4	5	Value 6	% of T.R 7	Value 8	% of T.R 9	% of GDP 10	Value 11	% of T.R 12
1954-1958	61.6	68.5	28.3	31.5	89.9	72.6	80.8	8.6	9.6	14.0	8.7	9.7
1959-1962	107.7	69.5	47.2	30.5	154.9	122.6	79.1	17.2	11.1	16.0	15.2	9.8
1963-1966	154.1	70.5	64.5	29.5	218.6	166.9	76.3	25.3	11.6	16.4	26.4	12.1
Average 1954-1966	107.8	69.5	46.7	29.4	154.5	120.7	78.7	17.0	10.8	15.5	16.7	10.5

Note : Except for rounding error, columns 1 + 3 = 5 = 6+ 8 + 11, and columns 2 + 4 = 100.0 = 7 + 9 + 12

Source: i) R.S. Porter, Economic Trends in Jordan, Middle East Development Publications, Beirut, (July 1961).

ii) Jordan Department of Statistics, National Account Statistics, 1959-1966, (Amman : Department of Statistics Press, n.d.).

During this period however, the government of Jordan felt the need for formal economic planning. As Chenery[21] noted that, "a development programme serves a variety of purposes. It is at once a political symbol of a governments' commitment to economic and social progress, a general strategy for remodelling the economy and its institutions, a basis for decisions on individual investment projects and a standard against which to measure results".

Adhering to this notion therefore, the Jordan Development Board started formalized planning in Jordan, for the first time, by publishing the first Five Year Plan 1962-1967. However, as a result of the lack of the aggregate data necessary for planning, the plan was rather a number of project proposals with apparently no clear strategy.

Assuming a continuing level of budget support matching that of the 1961-1962, the Plan projected an 8 per cent annual GNP rate of growth[22]. The basic assumption of the plan proved invalid shortly after the start of its implementation. Therefore, the plan had to be revised, so it was replaced by the new Seven Year Program for Economic Development of Jordan, 1964-1970. The goals of the plan were put in order of priority as follows: (1) major reductions in the external balance of trade deficit and such reduction in dependance upon budget support as Jordan may be able to sustain; (2) an increase in per capita income; (3) a reduction in the level of unemployment.

Stating the goals and their order of priority in this way reflects, among other things, the governments' concern about the major bottlenecks

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21 H.B. Chenery, "Alternatives to Development Planning". in E.A.G. Robinson, ed., Problems in Economic Development, (London : Macmillan & Co. ltd, 1965), p 391.

22 Jordan Development Board, The Five Year Development Plan, 1962-1967, (Amman, n.d.).

in the economy at the time. Even though the Plan was optimistic in its aggregate projections nevertheless, it appears that by 1967 the plan achieved most of its objectives. GNP grew at an annual average of 11.8 per cent coupled with price stability. Even though dependance on foreign aid decreased relatively, however, it did not reach the level projected by the plan.

1.3.2 Development in the Agricultural Sector.

Jordan has always been described as predominantly agricultural, however, available data reveals that this importance given to the agricultural sector among other sectors of the economy has been declining. This is evident from the declining share of the agricultural sector in GDP, from almost 30 per cent in 1954 to 18.5 per cent in 1966, Table 1.4.

During the period 1959-1961, 51.3 per cent of the value of total agricultural production came from fruit and vegetables, 19.3 per cent from grains, legumes and tobacco, 27.2 per cent from livestock, poultry and fish, and 2.2 per cent from forestry and miscellaneous sources[23].

This large contribution came about mainly through the extension of irrigation, especially the East Ghor Canal Project which diverted the water of the Yarmouk River into a 70 km canal in the Jordan valley running parallel to the Jordan river on its East Bank; and the introduction of improved agricultural technology most effectively in irrigated areas.

However, most of Jordan's agriculture especially field crops depends heavily on scarce and unevenly distributed rainfall which results in subjecting the agricultural production to vast production fluctuations. During the period 1954-1966, the value of grains and legumes production fluctuated between as low as JD 2.1 million in 1960 and a high of JD 10.8

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23 Jordan Development Board, The Seven Year Program For Economic Development of Jordan, op. cit., p. 74.

TABLE (1.4)
INDUSTRIAL ORIGIN OF GROSS DOMESTIC PRODUCT
IN JORDAN (selected years)

SECTOR	1954		1956		1958		1960		1962		1964		1965		1966		Average 1954-1966	
	value	share	value	share	value	share	value	share	value	share	value	share	value	share	value	share	value	share
1) Agriculture, Foreatry and Livestock	14.2	29.8	19.0	30.9	12.9	18.7	14.6	16.4	20.9	19.2	34.1	25.1	34.1	22.6	27.6	18.9	19.9	21.2
2) Mining, Manufacturing and Electricity	4.2	8.8	6.3	10.3	7.6	11.0	7.6	8.5	8.8	8.1	13.6	10.0	17.9	12.7	19.2	12.8	9.6	10.2
3) Construction	1.2	2.5	1.7	2.8	2.4	3.5	4.5	5.0	6.2	5.7	5.5	4.1	7.9	5.2	9.3	6.2	4.4	4.3
4) Transportation	4.4	9.2	6.8	11.1	9.0	13.0	11.1	12.4	12.5	11.5	12.0	8.9	12.6	8.4	14.4	9.6	10.2	11.2
5) Trade and Banking	9.3	19.5	10.3	16.8	14.4	26.8	20.4	22.8	25.1	23.2	29.5	21.8	33.5	22.2	31.7	21.3	20.6	21.4
6) Ownership and Dwelling	2.3	4.8	2.9	4.7	3.3	4.8	7.1	7.9	8.6	7.9	9.9	7.3	10.7	7.1	11.2	7.5	6.6	6.5
7) Public Administration and Defence.	9.1	19.1	11.5	18.7	15.6	22.6	15.8	17.7	17.1	15.7	19.7	14.5	21.4	14.3	22.0	14.7	15.7	17.6
8) Other Services	3.0	6.3	2.7	4.7	3.9	5.6	8.3	9.3	9.5	8.7	11.2	8.3	12.8	8.5	14.1	9.4	7.6	7.7
Gross Domestic Product [a]	47.7	100.0	61.2	100.0	69.1	100.0	89.4	100.0	108.7	100.0	135.5	100.0	150.9	100.0	149.7	100.0	94.7	-
Gross National Product [b]	52.4		68.5		77.1		105.7		130.8		160.6		180.5		185.8		111.2	

[a] GDP at factor cost. [b] GNP at market price

Source: (i) R.S. Porter, Economic Trends in Jordan 1954-1959, op. cit.

(ii) Department of Statistics, The National Accounts, 1959-1967, op. cit.

million in 1964, which apparently was a good crop year due mainly to good weather conditions.

Moreover, during the period under consideration, considerable changes in Jordanian cropping patterns took place as is demonstrated in Table 1.5 below.

Table (1.5)

Changes in Cropping Patterns in Jordan (selected years)

(per cent of total cultivable area)

	1956	1961	1964	1965
(i) Field Crops	84.7	74.9	74.0	72.9
(ii) Vegetables	5.1	10.1	11.0	11.3
(iii) Fruit Trees	10.2	15.0	15.0	15.8
All Crops	100.0	100.0	100.0	100.0

Source : FAO, Mediteranean Development Project, Jordan Country Report (Rome, 1967), p.50

While the percentage of areas cultivated with field crops to total cultivable areas declined from 84.7 per cent in 1956 to 72.9 per cent in 1965; the percentage of the areas cultivated with vegetables picked up and increased from 5.1 per cent in 1956 to 11.3 per cent in 1965. Furthermore, the percentage of the areas cultivated with fruit trees went up also from 10.2 per cent in 1956 to 15.8 per cent in 1965.

It is argued however, that this cropping pattern was the result of, inter alia, government policy which concentrated on irrigated agricultural land in the Jordan valley in particular, and more or less neglected development, if any, in the rain-fed areas.

The agricultural production was left to the private sector, however, the government have a heavy responsibility in assisting the farmers to increase efficiency and expand production. Nevertheless, this governmental interference in the agricultural sector lacked a steady and clear strategy which resulted from a varied range of governmental departments being responsible about one part or another in this sector[24]. Furthermore, even though the agricultural sector contributes on the average about one-fifth of the GDP, and employs about 40 per cent of the total labour force. Yet self-sufficiency in food production has not been attained[25].

By and large, production methods remained primitive and depended heavily on labour intensive methods. However, it could be argued that the abundance of cheap labour during the period under consideration was one of the main barriers that hindered the introduction of modern technology into this sector.

1.3.3. Developments in the Industrial Sector.

Industrialization, was at the time, a recent phenomenon in Jordan, however, the sector was subject to a gradual development. In the early 1950's the industrial sector was restricted by several constraints, among which were : (1) The political and military tensions in the area which inhibited new investments; (2) Scarcity of local raw materials; (3) The small size of the Jordanian market; (4) Lack of skilled manpower; and (5) The high cost of transportation, since Jordan had to re-rout its trade direction to Bierut via Damascus, a rather costly trip.

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24 While the National Planning Council is responsible for the overall Policy, the Ministry of Agriculture is responsible for an overall implementation of government policy, further the Jordan Valley Authority is responsible for the Valley's development, and so on.

25 Ministry of Culture and Information, Jordan 1973, A Brief Survey, op. cit, p. 45.

By the late 1950's some of these factors were demolished. The influx of an estimated 350.000 refugees associated with 460.000 the inhabitants of the West Bank, as was mentioned earlier, provided a relatively larger market through more demand for consumer goods. This was coupled with relatively stable political situation throughout the 1950's, except for the 1957-1958 crisis, and a gradually increased government expenditures in the infrastructural base. All these factors together, inter alia, gave rise for a rapid industrial development by the early sixties.

Since 1954, the value of industrial production increased from JD 6.0 million to over JD 42.3 million in 1966, and its share in the Gross Domestic Product increased from about 8 per cent in 1954 to 13 per cent in 1966, Table 4.

It could be argued that these growth rates were mainly attributed to an increased domestic demand and import substitution. The increased demand came about as a direct result of an annual average rate of growth in GDP of 10.8 per cent. Allowing for 2-3 per cent inflation rate would result, however, in a 7-8 per cent real growth rate in GDP. This growth in GDP was accompanied by drastic population changes alluded to earlier.

As an indicator of import substitution, Padma Desai used the change in the ratio of domestic production to total available supplies[26]. Applying this indicator to Jordan, Mazur noted that in all but the relatively unimportant paper and printing sector, the ratio's rose, generally by significant amounts[27].

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26 Padma Desai, "Alternative Measures of Import Substitution", Oxford Economic Papers, (Nov. 1969) : pp 312-324.

27 Michael P. Mazur, op. cit., pp 209-212

The industrial activity is, as it is the case in agriculture, left to the private sector. However, successive governments in Jordan have taken an active role in promoting the growth of this sector. In addition to encouraging investments through favourable legislation, such as exemption from various taxes and other charges of fixed assets and their necessary replacement parts; exemption of the net profits from income tax and social services tax for a period of six years from the day of declaration of the project[28], they also have participated in large projects; extended loans to some industrial undertakings and also guaranteed loans for a number of the large projects.

Two main characteristics are considered however typical in Jordan's industrial sector. One is that the sector being dominated by few large-scale establishments such as phosphate mining, petroleum refining and cement production. Apart from these, other industries include a number of foundaries, a tannery, several marble factories, textiles, oil pressing, bottling and brewing, some food products, cigarettes, and batteries. Secondly, apart from phosphate, batteries and cigarettes, most of the industrial production was directed to satisfy domestic demand and few industries were able to provide for export.

1.3.4 The Balance of Payments.

There is a fundamental linkage between the economic performance of the country and the current situation of its balance of payments which is considered, for a developing country, a major aggregate constraint on the pace of economic development. The existance of a deficit on current account, means after all, a transfer of foreign resources into the country to fill the foreign exchange gap.

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28 For details see, Government of Jordan, "Encouragement of Investment Law No. 53 of 1972," which superceded Law No. 1 of 1967, and their amendments thereafter. Also see, Government of Jordan Investment Conditions and Opportunities in Jordan, (Amman : 1972)

Traditionally, this was the case of Jordan. The balance of payments has been characterized by a large structural imbalance, in which exports have covered only a relatively small fraction of imports. Furthermore, the trade deficit has been widening with the passage of time.

Jordan's value of imports increased considerably over the period of analysis. It increased from JD 19.8 million in 1954 to JD 76.7 million in 1966, an average annual rate of growth of 10.7 per cent. Furthermore, its ratio to total foreign trade (total Exports + total Imports) maintained a high level of 87.5 per cent. During the same period exports stayed at a very low level both in their volume and value. The value of exports increased from only JD 6.1 million in 1954 to JD 32.1 million in 1966, however, exports showed an annual average rate of growth of 15.3 per cent which exceeded that of imports, table 1.6.

This trade pattern which was a resultant of the overall structure of economic activity led to growing trade deficit which increased from JD 13.7 million in 1954 to reach JD 44.6 million in 1966, hence maintaining an average growth rate of 12.0 per cent.

This trade deficit was always referred to as a major problem facing Jordan. However, it is argued that an actual deficit need not always be the basis for a balance of payments problem. Bernstine, for example, noted that "a country whose balance of payments is not a proper one has a payments problem". He describes a "proper" balance of payments as an equality between payments and receipts for current transactions and "ordinary" capital movements - - which means that the country is not compelled to economic activity below a "desirable" level or to restrict imports solely for balance of payments purposes[29].

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29 M.O. Clement, et. al., Theoretical Issues in International Economics (Boston : Houghton Mifflin Co., 1967), pp 234-235.

Table (1.6)

Total Imports, Total Exports and

Trade Deficit, 1954-1966

(In millions of JD's)

Year	Total Imports		Total Exports a		Ratio of Exports to Imports	Trade Deficit	
	value	% change	value	% change		value	% change
1954	19.8	-	6.1	-	30.8	13.7	-
1955	26.8	35.4	7.3	19.7	43.5	19.5	42.3
1956	26.2	-2.2	9.4	28.8	35.9	16.8	-13.8
1957	32.4	23.7	10.7	13.8	33.0	21.7	29.2
1958	36.7	13.3	9.9	-7.5	27.0	26.8	23.5
1959	43.4	18.3	11.8	19.2	27.2	37.6	17.9
1960	47.1	8.5	12.8	8.5	27.2	34.3	8.5
1961	46.6	-1.1	16.9	32.0	36.3	29.7	-13.4
1962	51.8	11.2	19.1	13.0	36.9	32.7	10.1
1963	61.0	17.8	20.4	6.8	33.4	40.6	24.2
1964	56.7	-7.0	24.6	20.6	43.5	32.1	-20.9
1965	63.5	12.0	28.6	16.2	45.0	34.9	8.7
1966	76.7	20.8	32.1	12.2	41.9	44.6	27.8
Average 1954-1966	45.3	10.7	16.1	15.3	37.6	29.2	12.0

Note: a Total Exports includes Re-exports.

Source: (i) I.M.F., Balance of Payments Yearbook, 1954-1959, (Washington, D.C., : I.M.F., n.d.), vols. 8 and 12.

(ii) Central Bank of Jordan, Monthly Statistical Bulletin vol. 5, No. 12, Dec. 1969.

Furthermore, import surplus is usually considered a rough measurement of the need of foreign resources, hence one is tempted to argue that in order for Jordan actually to receive any desired transfer of real resources from abroad, imports have to exceed exports by the full amount of the desired resources. However, it must be clear that the reasons behind giving foreign aid are far more complicated than a mere structural imbalance in the country's balance of payments.

This line of argument however, proves valid when the means of financing this import surplus are considered. Import surplus is financed by two main sources: Firstly, a surplus on the services balance, and secondly, and more importantly, net transfer payments from abroad.

Within the services balance, tourism became significant to Jordan since the early 1960's. In 1964 tourists expenditures in Jordan amounted to about JD 8.0 million according to the balance of payments estimates, while payments of Jordanian outside Jordan amounted to JD 4.0 million. This means that a net payment of JD 4.0 million of foreign exchange. These receipts of foreign exchange from tourism increased to JD 11.0 million in 1966, Table 1.7.

The second item which offsets the trade deficit is transfering payments, which includes transfers of Jordanians working abroad and transfers to the central Government in the form of foreign aid. These transfers increased substantially with the passage of time to reach about JD 35.0 million in 1966, while were as low as JD 12.9 million in 1954.

It could be maintained here, that the above discussed pattern of trade along with the overall economic structure which was discussed earlier in the chapter led to the fact that economic development in Jordan became

TABLE (1.7.)

SUMMARY OF THE BALANCE OF PAYMENTS

1954-1966

(In millions of JD's)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Commodity Trade Balance	-15.5	-21.5	-19.5	-24.3	-30.5	-35.9	-37.4	-35.6	-37.6	-47.0	-40.7	-45.9	-56.9
Invisible Trade Balance	4.38	5.7	6.3	9.0	9.3	8.3	9.0	10.2	14.4	10.9	16.2	19.0	21.3
Balance on goods and Services	-11.2	-16.0	-13.2	-15.2	-21.2	-27.7	-28.5	-25.5	-23.2	-36.2	-24.5	-26.8	-35.6
Net Transfer Payments	12.9	15.8	15.2	16.7	23.5	25.7	26.5	26.2	25.2	24.1	28.5	29.5	35.1
Balance on Current Account	1.70	-0.2	1.97	1.5	2.3	-1.9	-2.0	0.8	2.0	-12.0	4.1	2.6	-1.5
Allocation of SDR's	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital and Monetary Gold [a]	-1.6	+0.1	-2.0	-1.8	-2.3	+1.1	-0.1	-1.5	+3.4	+7.6	-10.8	-4.3	-3.7
Errors and Omissions	-0.2	+,0.1		+0.2	-	+0.9	+2.1	+0.7	+1.4	4.4	6.8	1.7	5.1

A Minus sign signifies an increase in assets or a decrease in liabilities and the plus sign a decrease in assets or an increase in liabilities.

Source : Hanna S. Odeh, Economic Development of Jordan 1954-1971, Amman, 1972

highly dependent of foreign aid inflows. Indeed, without international transfers the deficit arising in the current account would probably not have reached such extreme levels and expenditures would probably have been restricted[30], thus slowing the pace of Jordanian economic development[31].

1.4 Economic Structure and Performance after 1967.

As was already demonstrated in the previous parts of this chapter, for several years prior to 1967, the Jordanian economy enjoyed a high rate of growth accompanied by financial stability. However, the 1967 war and its aftermath created a development hiatus and resulted in a host of problems. It could be argued that the war not only resulted in a curtailment of the pace of economic development of the country, but more importantly changed the direction of the economy, hence, affecting every aspect of life in Jordan.

The first direct result of the 1967 war was the occupation of the West Bank, an area however, constituted only 6 per cent of the total area of the country, yet it had contributed some 25 per cent of Jordan's cultivable land along with tourist places of great potential. Therefore, it had not only supplied about 40 per cent of its agricultural production, but also it meant a loss of a major source of tourisms income. Over and above, an estimated 300.000 refugees from the West Bank fled to the East Bank creating serious social and economic problems.

This situation was further aggravated by a period of internal disturbances which was initiated from a military confontation between the Palestinian resistance movement and the government of Jordan, which was

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30 This point will be subject to careful examination in chapter three.

31 Michael J. Marto, A Monetary Supply Model : Jordan, An unpublished Ph.D. Dissertation, University of Southern California, June 1970) p. 46

an indirect result of the war. Furthermore, the closure of the Suez Canal disrupted Jordan's foreign trade, particularly phosphate exports to Europe. The overall result was a partial paralysis, and of course a lower rate of economic growth.

It is not surprising, therefore that GNP dropped drastically by the end of 1967, for the first time, by 23.3 per cent over that of 1966[32]. Similarly, GDP recorded a drop of 23.1 per cent over the same two years. Moreover, although GNP at current prices showed an average annual growth rate of 14.9 per cent, real GNP growth did not exceed 4.3 per cent over the period of 13 years. Likewise, while GDP at market prices grew by 12.4 per cent, it recorded a 2.9 per cent annual average at real growth rate over the same period. Table 1.8.

The arising situation necessitates a sharp need for foreign aid to keep the government functioning and to cope with the 1967 war results and its aftermath. This financial assistance was made possible by Arab countries after the Khartom Arab Summit which permitted substantial government expenditures.

In 1969, the economic activity picked-up and stimulated by good harvest along with a boom in the construction sector which led to an increase in real GNP by 17.1 per cent over that of 1967. This increase however, came about after a rapid industrial recovery. The cement factory was producing at full capacity to fulfill the vast domestic demand resulting from the construction boom. Cement production rose from 321 thousand tons in 1967 to 481 thousand tons in 1969. Oil refinery was also faced with an enlarged market for its products resulting from the existance of the Iraqi and Saudi armies stationed in the

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32 It should be noted here that the above figure of a drop in both GNP and GDP must be taken with caution, because they do not represent only economic facts but rather a change in the estimation as well. Data after 1967 belongs to the East Bank only. However, when figures for GNP and GDP were taken before and after 1967 for all Jordan they still recorded a drop of 4.2 per cent.

Table (1.8.)

Gross National Product, Gross Domestic Product and their Growth rates in the East Bank, 1967-1979

(In Current and Constant 1967 prices).

(In million's of JD's)

Year	Gross National Product				Gross Domestic Product			
	Current prices		Constant 1967=100		Current prices		Constant 1967=100	
	Abs.	% change	Abs.	% change	Abs.	% change	Abs.	% change
1967	142.5	-23.3	142.5	-23.3	131.2	-23.1	131.2	-23.1
1968	166.4	16.8	166.9	17.1	156.1	18.9	156.6	19.3
1969	197.4	18.6	183.6	10.0	183.4	17.5	170.6	8.9
1970	187.0	-5.3	162.9	-11.2	174.4	-4.9	151.9	-10.9
1971	199.4	6.6	167.0	2.5	186.2	6.8	155.9	2.6
1972	221.0	10.8	170.7	2.2	207.2	11.3	160.1	2.6
1973	241.5	9.3	168.9	-1.0	218.3	5.4	152.7	-4.6
1974	279.3	15.7	162.8	-3.6	247.3	13.3	143.8	-5.8
1975	342.5	22.6	178.3	9.5	278.6	12.7	162.0	12.6
1976	542.5	58.4	253.2	42.0	401.7	44.2	187.5	15.7
1977	623.5	14.9	253.5	0.01	477.6	18.9	194.2	3.5
1978	714.1	14.5	272.1	7.3	569.1	19.2	216.8	11.6
1979	853.2	19.5	284.6	4.5	685.2	20.4	228.5	5.3
Average 1967-1979	-	14.9	-	4.3	-	12.4	-	2.9

Source: (i) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, no. 3, March 1980

(ii) Department of Statistics, National Accounts in Jordan, 1952-1976, (Amman : Department of Stat. Press, March, 1978).

country at the time, therefore petroleum production increased from 385 thousand tons in 1967 to 464 thousand tons in 1969.

However, this fairly rapid revival was disrupted yet again by the internal disturbances mounted into the country during the second half of 1970, which again resulted in a serious set-back, hence economic activity came to a standstill for more than two months. Furthermore, the situation was further agravated by the closure of both the Iraqi and Syrian borders in the mid 1971 as well as stoppage of the flow of financial assistance from Arab countries. Meanwhile, the United States resumed its financial assistance to Jordan which was halted in 1967.

Nevertheless, during the period 1967-1972, economic planning was carried out on an ad hoc basis. This is understandable if one takes into consideration the huge uncertainties at the time, be it the general political situation in which an era of no-peace no-war dilema prevailed or the rise of the Palestinian resistance movement which brought the economic activity in the country to a halt.

However, by 1972 the situation eased off to an extent whereby economic planning had to be resumed. Therefore, the National Planning Council[33] launched the Three Year Development Plan, 1973-1975. The Plan aimed at[34]: (a) creating at least 70.000 jobs; (b) achieving an 8 per cent annual growth rate of GNP; (c) enhancing and reactivating economic and social activity; (d) augumenting the reliance of the general budget on domestic revenues; and (e) strengthening the balance of payments and reducing the trade balance deficit.

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33 In 1971 the National Planning Council replaced the Jordan Development Board

34 National Planning Council, The Three Year Development Plan, 1973-1975, (Amman, 1972), p. 20

However, although the 1967-1971 period was characterised by a fairly reasonable price increases, yet in 1972 inflation started to be the new phenomena on the Jordanian scene, as is depicted by the Amman cost of living index Table 1.9.

Table (1.9)

Amman Cost of Living Index (1967=100)

	1967	1970	1971	1972	1973	1974
Index	100	114.8	119.7	129.4	142.9	171.5
Change		14.8	4.9	9.7	13.5	20.6

Sources: Central Bank of Jordan, Annual Report, 1974.

As the index increased from 129.4 in 1972 to 142.9 in 1973, an increase of 13.5 points revealing a new experience of inflation above 10 per cent[35]. The largest increase took place in food items which was further enhanced by a severe weather conditions during 1973 sharply reducing the harvest, however, recovery has continued in other sectors of the economy.

The world phosphate prices showed a remarkable increase by the early 1974, rising from only U.S. $14 to $63 per ton, therefore increasing the foreign exchange earning from Jordan's phosphate exports. At the same time, phosphate production was increased considerably from 1.080 thousand tons in 1973 to 1.675 thousand tons in 1974, a 55 per cent increase.

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35 Jordan experienced the largest increases in the cost of living index throughout the Arab World in 1972. The Cost of Living index (1970=100) in 1972 was as follows: Syria 106.0; Lebanon 106.6; Iraq 109.0; Saudi Arabia 109.0; Kuwait 100.0; and Egypt 105.3. IMF., International Financial Statistics, 1976.

Moreover, 1974 was an excellent crop year as a result of a favourable weather conditions. Wheat production increased considerably from only 50.4 thousand tons in 1973 to 244.5 thousand tons in 1974; while barley production increased from as low as 5.9 thousand tons to 40.2 tons during the same period.

These favourable conditions were further augmented by the fact that the 1973 oil-price boom manifested itself in an increased economic activities in oil-producing Arab Countries, which has its indirect effect on the Jordanian economy through an increased opportunities for Jordan's labour force in the Gulf States and Saudi Arabia. This movement of manpower, while resulted in an increased remittances from Jordanian working abroad from only JD 24.1 million in 1974 to JD 159.4 million in 1978, it nevertheless caused acute shortages in the key sectors of the economy, These shortages were made-up by importing labour force, particularly from Egypt and Syria.

By October 1974, the Arab Summit which was held in Rabat, granted Jordan more financial resources to maintain its military strength. This flow of financial resources gave rise for more government expenditure as will be discussed in chapter three. Therefore, while the pre-1972 era was mainly shaped by political factors, the post-1972 period in contrast was mainly affected by economic factors.

The prevailing conditions in 1974 were further enhanced by new factors in 1975. The increased flows of foreign aid; remittances from Jordanians abroad; and phosphate sales were further augumented, inter alia by an increased economic activity resulting from the civil war in Lebanon.

These factors together led to a construction boom by late 1975 and early 1976. This is obvious if the total area of building

permits[36] are taken into consideration. This indicator showed a 62 per cent increase in 1976 over that of 1975. However, this increased construction activity seemed to have subsided in the sense that previous growth rates of this activity in the sector were not repeated in 1977. Moreover, these factors led to tight labour market in Jordan along with huge land speculation which has never been experienced before.

Furthermore, 1975 marked a new era of Jordanian - Syrian economic cooperation. Such cooperation is reflected in a series of joint ventures, among which a land transport corporation which have a fleet of 300 trailers; a free trade zone area alongside the bo rders; a linked electric power stations; and economic planning is being set on the highest level of governments. This economic cooperation will, its hoped, provide Jordan with a potentially larger market for her exports.

By 1978, the economy witnessed a decreased rate of inflation from 15 per cent to 7 per cent. This reduction in the measured inflation rate came about as a result of a tight monetary and credit policy adopted in 1977 and reflected itself in early 1978.

Moreover, as was elluded to above, the manpower shortages resulted from the outflow of Jordanians to the oil-producing countries have been satisfied by importing labour, hence the balance of payments registered, for the first time ever, an outflow of remittances estimated at JD 20.0 million in 1978.

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36 The area of building permits (for residential and commercial purposes) is considered, particularly in the case of Jordan the best indicator to measure the construction activity for several reasons, the most important of which are (1) limited landscape within the cities and towns boudaries, (2) it is a reliable estimate since the permit obtained is used to get cement and other building materials (due to shortages), hence must be used in a short period of time.

It remains to be said that this period of the mid 1970's was distinguished by the launching of the Five Year Development Plan, 1976-1980. The Plan was eventually conditioned by the forgone factors arose by 1975 which gave rise to direct the attention of the planners towards solving the new bottlenecks in the economy, particularly in the labour market as well as the inflation rate.

Development strategy in the new period, 1976-1980, was formulated to give priority to the commodity producing sectors and related infrastructural projects. The strategy was intended to correct the structural imbalance in the national economy and to disperse the fruits of development outside the densly populated areas. In terms of principals, organization and policy measures, the development strategy[37] could be formulated by:

1) A better and more equitable distribution of national income.

2) Geographical distribution of projects and of population among production areas, as well as directing population movements towards such areas.

3) More active participation of all segments of society including women.

4) A clear family planning policy which enables all families to determine the ideal number of their members.

5) Educational planning arising at increasing investment in education without impairing its quality. Training of women and locating them in areas that serve to expand their participation in the labour force is required.

6) Achieving agricultural development by increasing productivity in irrigated or rain-fed areas and by expanding irrigated areas.

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37 National Planning Council, The Five Year Development Plan, 1976-1980 (Amman : RSS printing & publication corp., n.d.).

7) Expanding the exploitation of minerals already existing in the country[38]. In addition, efforts should be concentrated on prospecting and exploring for other minerals.

8) The Rationalization of foreign trade.

Within this general framework of development guidelines, the plan's main goals were set as follows.[39]

a) Achieving a 12 per cent annual growth rate of GDP

b) Augumenting the reliance of the budget on domestic revenues.

c) Reducing the trade deficit to JD 131 million by 1980

d) Distributing development gains among various regions and people of the country.

Available data allows for a quick examination of the target fulfillment of the plan in the first two years 1976 and 1977, given the fact that the plan still in progress.

The first two years witnessed growth rates, after adjusting for inflation, of only 60 per cent of the target specified by the plan, namely 7 per cent[40]. On the other hand, the targets for the growth of domestic revenues, both absolutly and as a ratio to total revenues, seem to have been met.

However, the plan target of having a trade deficit of only JD 131 million by 1980 is obviously beyond reach. Imports have been growing in a much faster rate than exports. By the end of 1977 the trade deficit stood at JD 371.1 million.

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38 It is worth noting that two major projects started in 1979 namely, the extraction of Potash and chemical fertilizers project in Agaba.

39 Ibid.

40 Royal Scientific Society, "The Performance of the Five Year Plan in the First Two Years, 1976-1977." a mimo.

Finally, the only available data on the distribution of income pertains to 1973[41]. However, it is possible, though not certain, that the income distribution has deteriorated over the last several years in favour of the well-to-do rather than for the poor[42].

The above briefly discussed indicators signifies the fact that the Five Year Plan was somewhat over optimistic. However, do these weaknesses in the plan document threaten any concrete harm to Jordan. development efforts? Mazur, suggests that over optimism in aggregative projections is unlikely to have any more serious consequences than mild embarrassment for the Planners[43].

1.5 Concluding Remarks.

Ever since the country was established, Jordan was subject to drastic changes. Such changes stemmed from two major sources; Firstly, that Jordan had a unique history mainly characterized by a mixed colonial background, and Secondly, an ever changing political and military situation in the Middle East which affected Jordan the most, since it has always been in the forefront of every activity in the area, be it political or otherwise.

This setting within which the country found itself, brought about vast changes. Within sixteen years the population of Jordan was united once and further disintegrated as a result of the conflict in the area. The adverse effects of such changes were mostly observed in an increased labour force and hence, unemployment prevailed, especially right after the 1948 events. Not to mention that the government had to divert some of its available resources to cope with the arising problems.

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41 Gazi Assaf, The Size Distribution of income in Jordan in 1973, (Draft). (Amman : Royal Scientific Society, June 1979).

42 RSS, op.cit.

43 Michael P. Mazur, op.cit., p.266

Prior to the 1967 war, the Jordanian economy witnessed a remarkable development and growth rates by most standards. Either GNP and GDP grew by more than a 10 per cent annually accompanied by financial stability which signifies a real growth rate in per capita income and a better standard of living. However, the picture has been changing rapidly since then, in terms of marked inflation rates and acute labour shortages, along with vast land speculation and a construction boom.

This pace of economic development and growth was accompanied, as is to be expected, by certain transformation changes within the various aspects of the economy, such changes ought to be spelled out in the following.

1) As was alluded to in the text, and rightly noted by many others, the relative importance of the sectors of the economy had changed. The agricultural sector's relative importance was declining throughout the period. This was accompanied by a noticable growth in the industrial sector. However, this growth was not enough to lead the country's pace of economic development. Furthermore, these changes give rise to the services sector to dominate the economy and hence, shaping up the direction of economic resources.

2) Secondly, but less importantly, a relative change in the resource pattern was observed in a relatively declining share of total consumption in GDP.

3) Jordan further witnessed a structural imbalance in her balance of payments. An ever-growing import bill coupled with a small share of exports mainly dependent on a few large scale export oriented industries gave rise to a troubled trade balance however, the trade deficit being financed by transfers from abroad.

4) Furthermore, Jordan has a financial imbalance due mainly to the inadequacy of domestically generated revenues which eventually led to more dependance on foreign aid.

The country in fact received an increasing amount of foreign aid, which made it possible for Jordan to pursue the aforementioned growth rates and to keep the government functioning in times of hardships. Indeed, one could argue that without foreign aid, the balance of payments would be seriously in deficit and this would most certainly retard economic development.

However, the striking feature is that throughout the period under examination, foreign aid has been taken for granted and hence development plans and their respective policies were formed as though foreign aid would continue to be an integral part of resource availability, Apart from some governmental attention during the mid 1960's, no serious effort has been taken to mobilize domestic resources to assume a more active role in furthering economic development.

Moreover, it should be stressed that foreign resources inflows are not likely to continue indefinitly, since on the one hand, it follows to the greatest extent possible the political situation which is itself volatile. On the other hand, it is main objective is to provide the missing link in the chain of the development process, so that further progress became automatic and self-sustaining.

Lastly, from the forgoing analysis it would seem that the economic development plans have been rather over optimistic. However, they provided the necessary direction to the economy, maintained and reactivated the path of economic development and growth trends.

CHAPTER TWO

THEORETICAL CONSIDERATIONS CONCERNING FISCAL POLICY AND ECONOMIC DEVELOPMENT

The object of the present chapter is to provide some theoretical considerations relevant to the role of fiscal policy in promoting economic development as it is one of the major policies that influence the main economic variables. Therefore, fiscal policy could be viewed as a tool to correct the direction of the economy as well as a means of mobilizing resources for economic development. Accordingly, we will first discuss the macroeconomic objectives of fiscal policy with particular emphasis on developing countries. Also we will appraise the main criteria on which to evaluate a given tax structure. Lastly, we will critically analyse the different hypotheses related to the determinants of the behaviour of government expenditure.

2.1. The Macroeconomic Objectives of Fiscal Policy

Fiscal policy in the macroeconomic sense has an important bearing on the level of employment and prices, on the rate of growth, as well as upon the pattern of income distribution in the society. Consequently fiscal policy in developing countries has three major objectives[1]:

(1) To make available for economic development the maximum flow of human and material resources consistant with minimum current consumption;

(2) To maintain reasonable economic stability in the face of long-run inflationary pressures and short-run international price movements;

(3) To reduce, where they exist, the extreme inequalities in wealth, income and consumption standards which undermine productive efficiency, offend justice, and endanger political stability.

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1. Walter Heller, "Fiscal Policies for Underdeveloped Countries", in Richard M. Bird and Oliver Oldham, Reading on Taxation in Developing Countries. 3rd ed. (London: The John Hopkins University Press, 1975), p.5.

In reading closely into the foregoing objectives one could find that they are not basically different from those objectives assigned to fiscal policy in a developed economy which are usually perceived as the allocative, stability and distributive objectives. However, such similarities in objectives should not obscure the differences among developed and developing countries, be it general economic conditions, political, cultural or otherwise. These differences, of course, call for different emphasis as to the use of fiscal instruments, to tackle a certain problem, to be consistant with the particular conditions of developing countries.

2.1.1 Fiscal Policy and Economic Growth

Developing countries have been striving to achieve a reasonable degree of economic growth and development. For such efforts to materialize, capital formation, inter alia, is of course a prerequisite to any policy of self-help. To make available the necessary investments, it is without doubt recognized that domestically generated savings should play a vital role. However, it is equally recognized that domestic savings in almost all developing countries still form a very small percentage of GNP. This is mainly due to the fact that the vast majority of the population live on or around the subsistance level as a consequence of the low level of per capita income. Furthermore, the marginal propensity to consume in those countries is high enough to leave nothing but a relatively small share of income available for capital formation.

It is therefore, primitive to ascertain that fiscal policy has a great role in this respect. As Professor Nurkse puts it: "I believe that public finance assumes a new significance in the face of the problem of capital formation in "underdeveloped" countries[2]. Hence, given the

2 Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries. (New York: Oxford University Press, 1953), p.143.

low level of domestic savings in these countries, economic development hinges upon the ability and willingness of the governments to promote both voluntary as well as obligatory savings through taxation[3].

This task of fiscal policy is in fact different from that of a developed economy whereby a high average income ensures an almost automatic generation of effective demand and private savings. It is therefore, rather obvious that given the vital importance of private savings in developed countries, fiscal policy should concentrate on lessening the interference of taxation with the incentives to channel those savings into productive investments[4].

By contrast governments in developing countries are called upon to interfere in the economic life. This is in fact because they assume wider functions than those of developed countries. In the former, governments have to provide what is referred to as "social overhead capital" or infrastructual investments. This is mainly due to the fact that the private sector is generally unwilling to provide the necessary investments in areas such as education, health, transportation, dams construction, etc. The reasons behind the private sector aversion could be, (a) that such projects need a vast amount of capital which is not readily available, or, (b) financial returns on investments in such areas are remote while the private sector looks for a short-term yielding project, (c) or simply because of the high risks usually involved. It follows then, that due to the fact that investments in such areas contribute considerably to the process of economic development, if not even considered prerequisites, governments are compelled to provide the necessary investments. By the same token, governments of developing countries have to play a vital role in mobilizing enough resources so as

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3 Raja J. Chelliah, Fiscal Policy in Underdeveloped Countries 2nd ed. (London: George Allen and Unwin Ltd., 1969), p.22.

4 Walter Heller, op. cit. p.6.

to ensure a state of steady growth. Here taxation is an important instrument; as Heller puts it: "to break out of this [vicious] circle, apart from foreign aid, calls for vigorous taxation and government development programmes"[5].

The foregoing discussion leads us to believe that the role of fiscal policy in developing countries essentially has to be concerned with allocating more resources for investment and restraining consumption. This task of fiscal policy could be broken down into three main parts, that is, the financing of social overhead investments directly from governments; participating in privately owned projects by injecting needed capital; and providing the necessary incentives for the private sector to carry out its own investments. By contrast, fiscal policy in developed countries is concerned mainly with regulating the total flow of purchasing power, with determining the level of effective demand. This statement in fact reflects, among other things that in developed countries the Keynesian unemployment arises when the level of aggregate demand is deficient for purchase of the full employment output. Therefore, if long-run disequilibrium and unemployment are to be avoided, then, income must grow at a rate just sufficient to ensure the full capacity use of a growing capital stock[7].

However unemployment in developing countries is assumed to be of quite different nature. Unemployment arises for several reasons apart from deficient effective demand. This may, at least partially, explain the distinctive role of fiscal policy in developing countries. For Musgrave[8], unemployment in those countries arises for several reasons among which the following could be singled out:

(1) The lack of incentives to work which is a resultant factor from low wages due to the small capital stock.

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5. United Nations, Technical Assistance Administration, "Taxes and Fiscal Policy in Underdeveloped Countries". (New York, 1954), p.3.
6. Raja J. Chelliah, op. cit., p.44.
7. Ibid. p.47
8. R.A. Musgrave, op. cit., pp.203-211.

(2) A further cause of unemployment may be found in rigidities in the proportions in which labour and capital can be combined, and

(3) The situation may be such that increased output could be achieved with little additional capital, provided the necessary organizational effort and know-how were forthcoming. Therefore, the primary role of fiscal policy in developing countries is to raise the necessary savings in order to increase the productive capacity.

By and large, the role of fiscal policy as a means of mobilizing resources could best be explained in a simple mathematical model of the Domar-Harrod type[9]. It is well to bear in mind however, that this model embodies certain weaknesses which are documented in economic literature[10]. Yet, it has frequently been applied to explain aspects of developing countries[11].

Basically, the Domar-Harrod model assumes a fully employed economy[12]. In this model, if the actual rate of growth, r, is more than the desired rate of growth[13], g, then this will eventually produce a situation of cyclical instability or a secular inflation and vice versa. Now, in order to achieve a steady growth in the model and to avoid such

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9. Other models such as the "Dual-economy" type has a special appeal in the case of developing countries, in which it is assumed that the economy is composed of two main sectors, namely, the agricultural "subsistance" sector, and the non-agricultural "modern" sector.

10 See for example, Amartya Sen. Growth Economics, Penguin Books, 1971.

11 Chelliah, op. cit., p.47 who used it to explain the role of fiscal policy in India.

12 The following discussion is based on R.A. Musgrave and P.B. Musgrave, Public Finance in Theory and Practice, 2nd ed., (Tokyo: McGraw Hill kogokush Ltd., 1976), p.742.

13 Here two observation should be made about the cyclical instability involved in the desired "Warranted" rate of growth: (1) Once all unemployed are back at work, the natural rate of growth must set a ceiling against which, alas, the faster desired rate of growth must eventually collide, and (2) The desired rate of growth, even if originally established will not persist after being disturbed. For more details see P.A. Samuelson, Economics, 10th ed., 1976, pp. 748-758.

instability, the full employment rate of growth rn, should equal r and g.

Suppose that the objective is to achieve a 2% annual rate of growth in per capita income. With, say, a 2% annual rate of growth of population, GNP must then grow at slightly above 4% annually. To achieve this GNP rate of growth requires a certain rate of capital formation, Z. This could be crudely estimated by the Incremental Capital-Output Ratio (ICOR), which is defined as follows:

$$Z = \frac{\Delta K}{\Delta Y} = \frac{I}{\Delta Y} \qquad (1)$$

where,

K = capital stock

I = annual investment (= ΔK).

Y = national income (GNP)

if g is the desired rate of growth.

$$g = \frac{\Delta Y}{Y} \qquad (2)$$

then the required investment rate may be obtained by substitution as

$$\frac{I}{Y} = \frac{\Delta K}{\Delta Y} \cdot \frac{\Delta Y}{Y} = Zg \qquad (3)$$

Therefore, if Z = 3%, and g = 4%, $\frac{I}{Y}$ = 12%.

Now, to assure economic balance, this investment ratio must be matched by an equivalent saving ratio in the economy, if the 4% desired rate of growth is to be attained. Then we must have,

$$Sp + Sg = Zg\ Y \qquad (4)$$

where,

Sp = private savings, Sg = Government savings.

But we know that private savings is a function of disposable income which is given by

$$Sp = s\ (Y - T) \qquad (5)$$

where,

s = the marginal propensity to save and,

T = total tax revenue

equation (5) could be rewritten as

$$Sp = s(1 - t)Y \qquad (6)$$

where t is the total tax rate.

Likewise, government savings is given by,

$$Sg = tY - \alpha Y \qquad (7)$$

where α is current expenditure of government as a fraction of national income,

By substituting equations (6) and (7) into (4) we get,

$$t = \frac{Zg - s + \alpha}{1 - s} \qquad (8)$$

Equation (8) therefore provides an estimate of the necessary tax rate required to achieve the target rate of growth of national income. We already have Zg = 12%, then if we know the marginal propensity to save, s, and α, t could be estimated.

This is a simple model where consumption is assumed to be a function of disposable income, in real life it may be a function of many other variables. The effects of taxes is assumed to be upon consumption while it may be on savings as well.

This leads us to consider briefly the effect of fiscal policy on capacity output and growth. In the context of a full employment model, income may be spent either on consumption or saving (investment). Therefore, Government revenues be it in the form of taxes or domestic borrowing may reduce expenditure by an equal amount. The main issue here is whether such a reduction takes place in private savings and thereby investment or private consumption. It is argued that such an issue may not arise in the context of developing countries since private savings are not institutionalized. The demand for money is a demand for liquid

money given the fact that financial assets are generally not widely available. This may be the case for lack of developed capital markets; lack of confidence in already existing financial institutions; or merely due to the existence of inflationary tendencies.

Now, it is generally accepted that, for a wide range of reasons, the marginal propensity to consume in developing countries tends to be high and therefore there are small savings available for investment. Due to the own characteristics of developing countries, the market mechanism alone is therefore unable to generate the necessary savings, hence the need for fiscal action in order to raise the necessary resources on the one hand, as well as providing the needed incentives to channel other savings into investments. Finally, as to the tax rate resulted in the above formulation, it remains to the government concerned to decide whether this tax rate is feasible, depending on the particular circumstances and economic conditions of its own.

2.1.2 Stabilization Aspects of Fiscal Policy

Developing countries are generally characterized by a relatively large trade sector and particularly depending, in most cases, on a few exports of primary products. Also they are dependent on foreign sources to satisfy their needs of manufactured goods and often of foodstuffs as well. This dependency leads to the vulnerability of their economies to the world market fluctuations and their destabilizing influencies. However, it may well be argued that any export-orientated economy runs this risk. Yet, the degree of externally induced instability differs between an economy which depends on one or two

export-orientated primary products and an industrially diversified one.

In periods of high international demand, exports of developing countries tend to increase with a consequent increase in the exports sectors income. This may be followed by a year lag of imports demand, therefore heavier demand for goods and services takes place partly covered by an increase in domestic production and the rest is covered by imports. A decline in exports may lead to a movement in the opposite direction. A contracting demand for exports leads to a similar contraction in overall demand in the economy, coupled with a decrease in revenues, thereby affecting the levels of income and employment particularly in the export sector. The government is faced with a situation whereby its revenues decreases and at the same time needs to maintain the level of its expenditures. This in turn leads to a deficit with its inevitable inflationary effects.

It is clear from the above argument that changes in the level of foreign demand thus have an inordinate impact on the domestic economy and the foreign trade balance[14].

In developed economies, fiscal policy is an economic stabilizing device. In developing countries this role of fiscal policy is conditioned by both the externally induced destabilizing influences as discussed above as well as by the characteristics of their economies. This is not to suggest however, that developing countries have no fiscal devices to counteract the world market fluctuation effects on the domestic economy. Export and import taxes as well as the manipulation of exchange rates may be used in such circumstances in order to lessen the exposure of their economies to the vagaries of external destabilizing

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14 For more details on this argument see, R.A. Musgrave, Fiscal Systems, (New Haven: Yale University Press, 1969); Also see, Alan Peacock and Douglas Dosser, "Stabilization and Economic Planning in African Countries" Public Finance, vol. 17, no.3, 1962.

Influences.

However, it should be kept in mind that the use of fiscal and/or monetary policies in such situations as a counter-cyclical device may introduce wider disturbances. For example, the use of export duties as a stabilizing device may render the government revenues to greater instability, due to the fact that such duties will eventually fluctuate according to changes in foreign demand for or prices of exports. On the other hand, when the demand for exports is high, the volume of imports is also high as a result of greater availability of foreign exchange as well as increased demand as said before; import duties then bring in correspondingly greater revenues. On the other hand, if the demand for exports falls, there is a stringency in the foreign-exchange market, import restrictions are tightened, and there is a corresponding fall in the revenue from import duties[15].

Peacock and Dosser, in a study where a basically Keynesian model is adopted to developing countries in Africa, suggested some other devices. As export receipts fall, there will be a fall in government receipts. The government can respond in a number of ways[16].

(1) reduce its current or capital (development) expenditure

(2) reduce its own imports;

(3) draw down its foreign exchange reserves (or negotiate a loan or grant from a foreign country or international agency);

(4) meet the deficit by borrowing or money creation through a fiduciary issue.

Each of these sets of devices has its attractions as well as objections. Even if developing countries wanted to adopt anti-cyclical fiscal measures

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15 R. Chelliah, op. cit. p.37

16 Allan Peacock and Douglas Dosser, op. cit., p.243.

in order to lessen the vulnerability of their economies to the adversities of outside pressures, they might find it harder to achieve tangible results due to the characteristics of their economies. In predominantly agricultural economies, supply is likely to be relatively inelastic. Moreover, the organization of production is characterized by many institutional rigidities. Furthermore, embarking on stabilizing fiscal measures requires the political will as well as the economic skill in adopting such measures.

Prebish[17] suggested that the solution to such cyclical tendencies which emanate from the exposure of developing economies to world market fluctuations would be to make the internal structure of the economy strong enough to divert the effects of such fluctuations outward so that internal economic activities could progress without periodic interruptions. Therefore, Prebish suggests structural changes rather than simple straightforward anti-cyclical fiscal measures. The needed structural changes involve, among other things, income redistribution and changes in the pattern of consumption.

However, one could safely argue that the aforementioned structural changes advocated by Prebish are essentially of a long-term nature. In a stabilized programme, time is so important a factor if the conteracting measures are not to cause long-term hardship for the economy. Therefore, it remains that fiscal measures are quite useful particularly if coordinated with other necessary policies to fulfil the target of economic stabilization, be it price stability or the problems of unemployment.

It was only relatively recently that developing countries embarked upon programmes of industrialization or some kind of import substituting

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17 R. Prebish, "Economic Development or Monetary Stability": The False Dilemma". In I. Livingston, The Economic Policy for Development. Penguin Books, 1977, pp.345-384.

industries in order to lessen the exposure of their economies to the vagaries of international markets[18]. This is, however, by no means to suggest that industrialization by itself will bring about stability to developing economies. Yet, the fact remains that diversification of the industrial structure and the dependence of the economy on few primary products makes it less susceptible to external destabilizing influences.

By and large, it is argued that the successful application of fiscal measures as stabilizing devices needs above all a reasonably developed economic structure so that the economy responds adequately to the measures taken. This seems to be the basic problem of developing countries. Moreover, there should be a certain level of coordination between the fiscal policy adopted and the monetary authorities in order to achieve the required targets of stability.

2.1.3 Fiscal Policy and Inequality

The task of fiscal policy as an income redistributor device is another major objective. In developing countries, economic development does not seem to result in alleviating the poverty and misery of the people. In other words, it is recognized that achieving a certain acceptable level of economic development did not necessarily bring with it a desired degree of equal distribution of the fruits of such development.

In developing countries, the function of fiscal policy as a device of income and wealth redistribution is largely one of attempting to

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18 This view is reflected, for example in the study by UNECLA "Theoretical and Practical Problems of Economic Growth", Doc. E1CN. 12/221, May 1951; see also UN, "The Economic Development of Latin America and Its Principal Problems", (1950), chap. VII; And more recently, for a detailed discussion of the views of different economists, see M.G. de Varies, "Trade and Exchange Policy for Economic Development: Two Decades of Evolving Views", Oxford Economic Papers, vol. 18, No. 1, 1966.

attain that degree of redistribution of income through taxation and government expenditure which most neatly balances (a) the humanitarian interest in sharing economic well-being more equally against, (b) the efficiency interest in maintaining sufficient inequalities of reward to serve as an incentive to the exercise of special economic effort and inequality.[19] The potential of fiscal measures for the redistribution of income is greater in developed countries for several reasons among which, (1) the degree of monetization of the economies; (2) the highly developed institutional framework; (3) the degree of progressiveness of taxes, and above all (4) the political will in these countries to achieve a more socially acceptable degree of income and wealth redistribution.

However, the situation in developing countries is quite different. The aforementioned conditions which presumably foster the potential and effectiveness of fiscal measures do not exist. Even where they partially exist, it is argued that they are not sufficiently developed to offer a reasonable basis for a more acceptable degree of income and wealth redistribution.

This pessimistic view concerning the efficacy of the fiscal system as an instrument of income redistribution in developing countries was bluntly advocated by Mahbub ul Hag of the World Bank recently. He referred to the prevailance of a "misguided faith in the fiscal system of developing countries and a fairly naive understanding of the interplay of economic and political institutions[20].

Notwithstanding the fact that this pessimistic view as well as the reasons behind it are partially supported by facts, yet it was only

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19 Walter Heller, op. cit., p.21

20 Mahbub ul Haq, "Employment in the 1980's: A New Perspective", International Development Review, December, 1971.

relatively recently that studies[21] on developing countries offered a more optimistic indication. Some of these studies pointed out the fact that some developing countries collected more than 20% of GNP in taxes. For example, Tunisia, Congo, Guyana and Brazil collected 20.7%, 23.4%, 20.6%, and 20.6% of GNP in taxes respectively[22]. This eventually would give these countries a substantial scope for using the fiscal system as a redistribution device. It is equally true though that some other countries such as Pakistan, Phillipines and Paraquay collected less than 10% of GNP in taxes[23], which in turn would make it rather difficult for them to pursue a redistributive path of income and wealth by fiscal means.

However, one should emphasize the fact that generalizations that emanated from cross-country studies must be taken with caution due to the great many differences among the countries themselves as well as among the regions of the developing world. Furthermore, the bulk of these international cross-country studies did not provide hard evidence or strong reason to believe that the fiscal systems in developing countries are inevitably regressive and ineffective as a means of distributing income[24].

The foregoing discussion however pessimistic, does not rule out therefore the role that fiscal policy can play in income redistribution.

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21 See for example, Raja J. Chelliah, "Trends in Taxation in Developing Countries", I.M.F. Staff Papers, vol. 18 (July 1971) pp.254-327; UNECA, "Public Finance in African Countries", Economic Bulletin for Africa, vol. 1 (June 1961) pp. 1-28; UNECAFE, "Tax Potential and Economic Growth in the Countries of ECAFE Region". Economic Bulletin for Asia and the Far East. vol. XVII (September 1966) pp.29-48.

22 Chelliah, op. cit. p.261

23 It is worth noting here that these calculations of tax ratios are based on the 1966-68 period, and eventually since then there is reason to believe that a reasonable degree of change took place either in the tax systems or the degree of development which inevitably has its effects on the performance and tax effort of these countries.

24 R. Bird. op. cit., p.3.

This qualification is dependent on the potential outcome of economic development in developing nations in terms of institutional build-up, monetization of their economies, as well as modernization of tax systems and other administrative machinery. Furthermore, it is believed that in spite of the exisiting negative factors that may hamper the use of fiscal measures for income distribution, still fiscal measures can achieve a degree of socially acceptable distribution through the indirect taxation of luxury consumption. Revenues from such sources could be channelled and transformed into investments in human capital, be it in health, education or nutrition. Certainly the provision of such investments on the expense of the lavish consumption will improve the situation of inequality even if by a small margin.

2.2 The Optimal Tax Structure

The appraisal of a given tax structure should take into consideration a number of important factors that emerged from different approaches to taxation. Clearly one could think of a number of requisites for a good tax structure.

The first consideration is the question of justice and fairness. A good tax structure should be equitable. More specifically, it should meet the double criteria of horizontal and vertical equity. In the first place there is the need to ensure that people in similar circumstances are treated alike. Equitable Taxation holds this to be a basic requirement for a good tax system. On the other hand, vertical equity calls for different treatment between people in unequal circumstances, related to society's evaluation of various states of well-being[25]. Both concepts are mutually interrelated.

Both the ability-to-pay and the benefit-received approaches

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25 R.A. Musgrave, "ET, OT, and SBT", Journal of Public Economics, vol. 6 (1976), pp. 3-16.

to taxation have a role to play in the quest for justice in taxation. The latter approach presupposes that everyone receives some benefit from Governments' provision of goods and services and should therefore contribute to the cost of sustaining them[26]. It is well recognised however, that there are many individuals with limited financial resources whereby if a tax is levied on them would result in a burden too heavy to be borne. It is therefore generally accepted that those who are barely able to sustain themselves should be exempted from paying taxes even though they do gain some benefit from government[27].

The benefit approach appears to have two attractions. On the one hand is that it appeals to people on equity grounds. On the other hand, it gives simultaneous determination of both the tax level and the government expenditure[28]. However, in spite of the fact that in certain cases involving direct taxes, i.e. the company income tax, the benefit approach can be considered quite effectively, yet it is evident that this principle of taxation has quite limited application.

The ability-to-pay approach is more generally accepted and its use more strongly defended than the benefit approach in the search for justice and equity. It is commonly believed that net income rather than gross income is a reasonably satisfactory measure of the ability to pay taxes. Ability to pay is also a function of wealth and wealth may be just as, or even more, important than income[29].

It is generally accepted that the higher the persons income the higher the proportion of that income should be paid in taxes to the

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26 R.A. Musgrave, The Theory of Public Finance, (Tokyo: McGraw-Hill Kogakusha, Ltd., 1969) p.67.

27 J. Scherer and J. Pate, Public Finance and Fiscal Policy. (Boston: Houghton Mifflin, 1966), p.165.

28 Charles M. Allen. The Theory of Taxation. (Penguin Books Ltd., 1971) p.99.

29 Ibid., pp.131-133.

government. In other words, this indicates that the rate of taxes should be progressive. There is, however, little agreement as to what is the appropriate level of progression. Clearly this depends to a considerable extent on the prevailing circumstances of the particular country in question, be it economic, political, social or otherwise.

Another factor which could be taken into consideration in appraising a tax system is that taxes should be chosen so as to minimize interference with economic decisions in otherwise efficient markets[30]. Imposition of excess burden should be minimized. This in particular is related to lessen the tax burden on profits of corporations that is believed to contribute most to economic development, hence providing incentives for more investment in capital goods. The so called neutrality approach to taxation seeks to minimize the extent to which taxation distorts individual choices[31].

A good tax structure should also ensure that the administration and compliance cost should be so low as is compatible with other objectives[32]. Moreover, the tax structure should permit an efficient and non-arbitrary administration and should be understandable to the tax payer. Most of the literature on the requirement for a good tax system tends to give this aspect less importance. In developing countries, however, tax administration could be a decisive factor and should be given the necessary consideration if the objectives of the tax system, in general, are to be achieved.

The tax structure should be designed in such a way to facilitate the

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30 R.A. Musgrave & P.B. Musgrave, Public Finance in Theory and Practice, 2nd ed., (London: McGraw-Hill Ltd., 1976), pp.210-211.

31 Charles C. Allan, op. cit., p.81.

32 W.P. Heller and K. Shell. "On Optimal Taxation with Costly Administration", American Economic Review vol. 74, 1974, pp.338-345.

use of fiscal policy for stabilization and growth objectives. As it was argued in the previous section, these are considered the most important macro objectives for fiscal policy, in which taxes are the primary tools for the achievement of such objectives. Taxes could be used to promote growth in the economy. Thus taxes and negative taxes (subsidies) are used so as to intervene in the market to induce greater output of goods and services[33].

Finally, a good tax system not only should generate adequate revenues, but there is a need for such revenues to be elastic in an upward direction. As will shortly be discussed, there is considerable evidence to suggest that as the national income expands there is a tendency for the public sector to expand at a faster rate. This in turn implies the need for government revenue to expand. Therefore taxes must produce adequate revenue to finance an expanding government spending, leaving aside the question whether this expansion is desirable or not.

Moreover, it is desirable that this increase in revenue from taxes should occur naturally and without the need for increases in the tax rates given the fact that a change in the tax structure needs a relatively long period of time to materialize. This can be achieved if the tax system is designed so that the marginal rate of tax is in excess of the average rate[34].

It is apparent that the foregone suggested criteria upon which to appraise a given tax structure may embody some conflicting objectives. For example, in order for a tax system to meet the equity objective both horizontally and vertically, may need to forego the requirement

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33 Charles C. Allan, op. cit., p.148

34 David Walker, "Taxation and Taxable Capacity in Underdeveloped Countries", in Milton Taylor ed., Taxation for African Economic Development (London: Hutchinson Educational Ltd., 1970)pp.203-234

for a simple tax administration. It follows though, that a more complex tax administration may raise the administrative and compliance cost of assessing and collecting taxes. Moreover, particular taxes may be judged favourable from one criteria and unfavourable from another.

Therefore, when such conflicting objectives arise, a good tax structure must ensure, apart from the fair burden distribution as well as other objectives, that such conflicting requirement be dealt with simultaneously according to the priorities of the society, and to try to minimize to the greatest extent possible the spillover negative effects that may arise.

It was only relatively recently that economists have introduced a time dimension to the evaluation of a tax structure during which they envisage a change in the tax structure that takes place with the process of economic development over time.

Musgrave divided the factors affecting the tax structure as development proceeds into two main groups, namely economic factors and political and social factors.

Musgrave[35] suggested that economic factors, such as those alluded to in the outset, affect the development of the tax structure in two ways. Firstly, as the structure of the economy changes with economic development, the nature of the tax base changes as well, and with it the "Handles" to which the revenue system may be attached. Secondly, as the country moves from its stage of economic development, this brings with it a change in the economic objectives of the tax policy as well as the economic criteria by which a good tax structure is to be judged.

Furthermore, as the economic institutional structure develops, and the private sector better organized, then taxation of the private sector corporation becomes more feasible as a result of an increased and

35 R.A. Musgrave, Fiscal Systems, op. cit., pp.125-136.

identifiable tax base. Thus, there is reason to expect that economic development coupled with the expected structural changes in the economy will bring about an increase in the share of direct taxes.

This argument was then supported by Thorn, who on data provided by Kuznets, indicated that in the early stages of development most countries tended to depend more on indirect taxes, however he concluded, there is a tendency in most countries beyond a certain point for the proportion of tax revenues provided by direct taxes to grow[36]. The basic reason behind this tendency might be explained by the relationship between per capita income and direct tax base. In other words, the rising per capita income gives rise to broader income base for direct taxes. Furthermore, the inherent characteristics of the various types of taxes coupled with changes in administrative capability, both of which are related to the level of economic development, give greater scope for more reliance on direct taxes as a means of increasing government revenues[37].

In a study of tax structures in thirty developing countries, Chelliah[38], did not confirm such a conclusion, but was only able to identify a decreased reliance on taxes on international trade. However, he noticed that a shift within direct taxes has taken place in favour of income taxes rather than property and poll taxes. In a yet more recent study Chelliah and others[39] found that emphasis on different taxes varied

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36 R.S. Thorn, "The Evolution of Public Finances During Economic Development", The Manchester School, vol. 35, 1967, pp.19-51.

37 Ibid, p.23

38 Raja J. Chelliah, "Trends in Taxation in Developing Countries", I.M.F. Staff Papers, vol. 18 (July 1971), pp.254-327.

39 Raja J. Chelliah, Hessel J. Bass and Margaret R. Kelly, "Tax Ratios and Tax Effort in Developing Countries, 1969-1971", I.M.F. Staff Papers, vol. 22, No.1. (1975), pp.187-205. It is worth noting here that the present study by Chelliah et al., was extended to cover 50 developing countries as well as a new period, namely, 1969-71 which to a certain extent may explain the changes in the results reached.

among developing countries with respect to their regions. Countries in the Middle East and North Africa have higher-than-average income taxes and taxes on production. Tropical Africa, by contrast, is the most dependent on international trade taxes. While Asia and the Far East have the lowest ratio of income taxes. Above all, percentage variations between regions is least for import taxes.

By and large, these studies suggested that there is a tendency for taxes to change with the change in the level of economic development. In fact the level of taxes has affected not only the stages of economic development as usually measured by the per capita income, but by a wide range of other factors alluded to earlier, which collectively reflect changes in the structure of the economy. Such factors and their effect on the tax ratios will be subject to empirical investigation later in chapter six.

2.3 On Some Determinants of Government Expenditures

In the previous two sections, the macroeconomic objectives of fiscal policy, as well as the requirements for a good tax structure, were briefly discussed. In this section, however, we intend to review in general terms, some of the hypotheses that were suggested in explaining the behaviour and pattern of growth of government expenditures.

In studying the pattern of government expenditure and their determinants, two approaches are usually followed, the "normative" and "positive". The former approach concerns itself with what "ought to be" on the basis of certain desirable characteristics developed in isolation. The later is concerned with "what is, was, will be" which involves appealing to facts by a rigorous analysis of the economic structure of the country concerned. Our review here will be confined to the positive approach.

The underlying impetus of the normative approach in explaining the government expenditures behaviour has been Lindhal's "Optimum budget"[40], model where the analogy of taxes to market price was drawn; and consequently, a similar price quantity equilibrium was suggested.

Likewise, the positive approach has an ancestor. This is the well known Wagner's "Law of increasing government activity"[41]. Notwithstanding the fact that the law generated a great many studies on the relationship between government expenditures and the stage of economic development, it nevertheless resulted in widely varied interpretations as will be discussed shortly.

However, the explanations of the determinants of government expenditure stem from two main directions, some concentrated on the demand side, others departed from the supply side of the issue. By and large, these explanations could be broadly categorized into three main groups. Firstly, those which related government expenditure to the stage of economic development; secondly, those which related such expenditures to revenue constraint as well as time and war (displacement effect); and thirdly, those which related government expenditure to differences in the economic system, political factors, and other conditioning factors such as the degree of openness of the economy. Here, we intend to discuss the first two groups in some detail and cover the rest very briefly.

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40 See Erik Lindhal, "Just Taxation: A Positive Solution", in R. Musgrave and Allan Peacock (eds.), Classics in the Theory of Public Finance (New York: The MacMillan Co., 1958), pp.168-176; see also R.A. Musgrave. The Theory of Public Finance, op. cit., pp.74-77.

41 Adolf Wagner, "Three Extracts on Public Finance", in R.A. Musgrave and A. Peacock (ed.), ibid., pp.1-8. Also a critical review of the law is found in A. Peacock and J. Wiseman, Growth of Public Expenditure in the United Kingdom, (London: Oxford U. Press, 1961), pp.16-20. It is worth noting here that we are not interested in the philosophical argument of Wagner's Law but rather in its outcome as to the growth of government expenditures as well as the alternative hypothesis revolved around it.

2.3.1 Government Expenditure and the Stage of Economic Development

There has been a growing concern recently about the pattern of growth and behaviour of government expenditures. Several studies of the behaviour of government expenditure concluded that government expenditure is positively related to the stage of economic development, as measured by per capita income. Such studies[42] revolved around Wagner's law mentioned earlier. Essentially it is taken that Wagner argued that government expenditure tends to rise at a rate faster than that of national income. This was interpreted as saying that the income-elasticity of government expenditure is greater than unity. In justifying the existance of the law, Wagner offered three reasons as to why the aforementioned development would take place[43].

Firstly, an expansion would come about with respect to the administrative and protective functions of the state because of the substitution of public to private activity.

Secondly, Wagner also explicitly predicted a considerable relative expansion of "cultural and welfare" expenditures, especially with respect to education and income redistribution, and,

Thirdly, Wagner suggested that the inevitable changes in technology and the increasing scale of investment required in many activities would create an increasing number of private monopolies. Accordingly, he predicted that such changes would create 'market failures' which have to be offset by more state domination.

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42 A representative sample may include: R.A. Musgrave and J.M. Culbertson, "Growth of Public Expenditure in the U.S. 1890-1948", National Tax Journal, (June, 1953), 97-115; A.M. Martin & A.W. Lewis, "Patterns of Public Revenue and Expenditures, "The Manchester School, (1956), 203-244; H.T.Oshima, "Shares of Government in G.N.P. in Various Countries", American Econ. Rev. (1957), 381-390; J.G. Williamson, "Public Expenditures and Revenues: An International Comparison", The Manchester School, (1961), 43-56; R. Thorn, "The Evolution of Public Finance During Economic Development", The Manchester School, (1957), 19-53.

43 R.M. Bird, "Wagner's Law of Expanding State Activity", Public Finance, vol. 26, (1971), 1-24.

Looking at the foregoing statement there seems to be no a priori reason as to why government expenditure should rise at a rate faster than that of national income. However, it may be true that with the process of economic development, the increasing complexity of the economic organization may generate a new set of basic public services which are of a remedial sort[44]. For example, the development of the modern sector, the emergence of corporations and the expanding markets may require further organizational bodies and the services of regulatory agencies. Furthermore, it is generally accepted that economic development is usually accompanied by an expanding urban centre, and some even argued that it is also accompanied by an increasing population, despite the fact that there has been no solid justification as to why this may happen. However, if this is the case then it follows that it is reasonable to expect an increase in government expenditures in administrative services as well as expenditure on law and order.

Moreover, it is also reasonable to expect that with rising income, people expect better diets, better health treatment and better education facilities, which would mean that even with population remaining unchanged, welfare expenditure must rise to accommodate such expectations. It is widely held that economic development is usually accompanied by inflationary pressures, so accepting this would mean that the increasing prices would exert pressures for an increase in welfare expenditure in order to maintain their real value.

It is conceivable therefore, that the demand for certain government expenditure may rise with rising income, which at the end means that the income elasticity of such expenditure, taken separately, is positive. Yet the fact remains that for Wagner's hypothesis that the income-elasticity of government expenditure is greater than unity to hold,

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44 R.A. Musgrave, Fiscal Systems, op. cit., p.79.

may require that most of these expenditure components must have an income-elasticity greater than unity. To reiterate, although it is conceivable that expenditure on certain government expenditures may rise with income, it is however, not certain whether this rise will be greater than that of income. In other words, one cannot be certain that all or most of these services have an income-elasticity greater than unity. It may even be argued that if there exists an excess capacity in such services it may render it unnecessary to expand their supply when income rises, but rather requires a better utilization of the existing services. It would, therefore, seem that when the components of government expenditures are taken separately, the plausibility of the hypothesis that government rises at a faster rate than that of national income, is inconclusive. This conclusion is shared with Pryor[45], who for example had shown that in developed countries, at least, disaggregated government expenditure did not conclusively support such an hypothesis.

On the other hand, several writers such as Musgrave, Andic and Veverka[46] have suggested that Wagner stressed the market failure to explain the income-elasticity of government expenditure. However, Bird[47] contended that, although it has not proved possible to adduce any evidence of the prevailence of market failures, it does not appear that this factor has played anything like the role Wagner originally envisaged for it, nor have expenditures on administration risen as Wagner apparently expected.

However, over the past few years several noteworthy studies have appeared in print which attempt to subject Wagner's law to empirical

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45 Frederick Pryor, Government Expenditure in Capitalist and Communist Nations, (London: George Allen & Unwin Ltd., 1968) pp.79.

46 Musgrave, op. cit., S. Andic and J. Veverka "The Growth of Government Expenditure in Germany since the Unification", Fiananzarchive, (January, 1964).

47 Richard M. Bird, op. cit., p.8.

investigation, some of them have already been alluded to earlier. Their conclusions have been on both ends of a scale. A number of these studies have been sceptical as to the existence of the law on the grounds of its philosophical basis which in their view invalidates the law. To quote Gupta, "his justification of his "law" is based on his particular social and political philosophy and on the validity of the organic theory of the state"[48]. Musgrave went even further in concluding that "the evidence remains puzzling and in need of further explanation, including greater emphasis on what we have called the non-economic factors"[49]. Others, on the other hand, while rejecting some of Wagner's original ideas have found qualified support for the law in their empirical investigation. Bird, for example, concluded that "it appears that Wagner's "law" holds in aggregate terms for most periods for all the countries mentioned", and further, that the most rapid expenditure increases have generally been in the social services, a result again not inconsistent with Wagner's original ideas[50].

In line with this confusion two points seem to be worth commenting on:

Firstly, most of the aforementioned studies have drawn their inferences from international cross-sectional comparisons at a point in time. This is an objectionable test of a hypothesis, the essence of which is a postulated change over time in a particular country. Actually the cross-sectional approach disregards, to a certain extent, the differences among countries, be it economic, political, cultural or otherwise.

Secondly, several studies have drawn their inferences from

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48 S.P. Gupta, "Public Expenditures and Economic Growth: A Time Series Analysis", Public Finance, vol. 22 (1967) p.426.

49 R. Musgrave, op. cit., p.124

50 R. Bird, op. cit., p.8.

observing the behaviour of the expenditure ratio, i.e. the ratio of government expenditures to G.N.P. in lieu of the more accurate technical income-elasticity. As Pryor makes very clear: "if the expenditure/GNP ratio rises, this mean that the income elasticity is greater than unity; if this ratio falls, the income elasticity is less than unity" [51]. Again this is also objectionable because both concepts are not basically interchangeable. Furthermore, fluctuations in G.N.P. influences the ratio, particularly so in developing countries where such fluctuations are very frequent. It follows that a rising expenditure ratio may come as a result of a declining G.N.P. rather than an increasing government expenditure.

Moreover, the different interpretations of Wagner's law which some writers related it to his own impreciseness, as did Pryor [52] in writing that "Wagner's style is so murky that my interpretation is open to some doubt", resulted in a different formulation with respect to the index used to reflect the behaviour of government expenditures [53]. Peacock and Wiseman, used the functional relationship $E = f(GNP)$, while Pryor used government consumption expenditures $Cg = f(Y)$. Goffman, on the other hand preferred per capita GNP, $E = f(\frac{GNP}{P})$. For Musgrave it is expenditure ratio as a function of per capita GNP, $\frac{E}{GNP} = f(\frac{GNP}{P})$. Yet Gupta used per capita expenditure as a function of per capita GNP, $\frac{E}{P} = f(\frac{GNP}{P})$. For each of the above formulations, the law holds if the respective income-elasticity is greater than unity.

To recapitulate, it appears that the evidence gathered by the vast volume of studies, however imperfect and scattered, appears more to support than to controvert Wagner's law.

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51 Frederic L. Pryor, op. cit., p.304, ff.5.

52 Frederic L. Pryor, op. cit., p.50, ff.1.

53 For a more detailed account of these indices please see Ved. P. Gandi, "Wagners's Law of Public Expenditures: Do Recent Cross-Section Studies Confirm it?" Public Finance, vol. 26, (1971), pp.44-56.

2.3.2 The Revenue Constraint

An alternative to the demand orientated approach was found from the supply of revenue side. While the former has linked the behaviour of government expenditure to the growth and level of per capita income, the latter suggests that it is the fixed government revenues that condition and shape the pattern of government expenditure. The argument springs from the high correlation between government revenues, particularly tax revenue, and expenditure[54]. Having this correlation in mind, it has been argued that tax revenues are fixed due to a complex of reasons, be it economic, political or otherwise. However, this argument might only hold in the short-run because of the governments inability to influence either the tax rate or the tax base, moreover, changing a tax structure, as was argued earlier, needs a long period of time let alone the fact that the tax base is to a certain extent dependent on economic development. More specifically, it is dependent on the raising of income which gives rise to more tax collection.

It could also be argued that the revenue constraint may operate due to the fact that the variables which presumably affect the behaviour of government expenditures are, more or less, the same factors determining the taxable capacity. Given the fact that the tax revenues form the largest part of government revenue, it follows then that the effect of such factors would be expected to affect both expenditures and revenues in the same direction. If we take into account that, particularly in developing countries, domestic revenues in most cases are short of meeting the expenditure level, then it is to be expected that the revenue constraint would, most of the time, be operating.

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54 Musgrave has found that the correlation coefficient between the expenditure ratio (E/GNP) and the tax ratio (T/GNP) for a sample of developing countries to be as high as 0.92, however, the coefficient was found to be comparatively smaller for countries with per capita income less than $300. See R.A. Musgrave, Fiscal Systems, op. cit., p.111, ff.14. His findings were also confirmed by H.T. Oshima, op. cit; and J.G. Williamson, op. cit.

If the revenue constraint, however interpreted, is considered in the case of developing countries against that of developed countries, it might be argued that this constraint is less serious in the latter than it is in the former. The reason for this inference is due mainly to two reasons. On the one hand, the tax systems in the developed countries are flexible enough to allow for a reasonably quicker change either in the tax rate or the tax base, moreover, the tax handles in such countries are available and adequately developed. On the other hand, it is argued that the highly articulated money markets in developed countries allow the governments to offset any deficiencies in the tax revenue by borrowing from the already developed money markets. By the same token, it is argued that since the foregoing conditions are basically non-existent in developing countries it would result in a more serious revenue constraint. This constraint may be eased in the case of developing countries by the inflow of foreign aid. However, it is argued that foreign aid itself will in most cases form a constraint on government spending, except for a number of countries which have relatively easier access to foreign resources due mainly to political reasons. Yet, even in such countries once the aims of the donor countries, for one reason or another, disappear then it seems that in such a situation the revenue constraint would be more serious than ever.

By and large, any of the sources of financing may form a revenue constraint. However, the extent to which any of these sources may be serious in conditioning government spending depends in the end on its relative importance to the overall government revenues.

Several attempts have been made to detect the presence of the concept. Lotz[54] for example, in a cross-section analysis of 37 developing countries has used the expenditure ratio, (i.e. $\frac{EXP}{GNP}$), as a revenue constraint. He seems, in essence, to have tackled the problem from

55 Jorgen Lotz, "Patterns of Government Spending in Developing Countries", The Manchester School, vol. 38, 1970, pp.119-144.

the other end because it is frequently argued that there is a two-way effect between revenues and expenditures, the revenue may affect the expenditure and vice versa. This, in fact, may be the case if the issue is considered on the basis of the benefit anlysis, particularly if the fees and charges are considered. However, due to the fact that this source of financing is relatively small in developing countries, this will cast some doubts on the relevance of using the expenditure ratio as a proxy variable to the revenue constraint. Furthermore, it is objectionable on the grounds that he essentially used the total (i.e. $\frac{E}{GNP}$) to explain changes in its components.

Alternatively, Pryor[56] argued that there exists a trade-off relationship between the various components of government expenditures. The presence of such a trade-off is more obvious when the revenue sources become so stretched, hence, expanding expenditure in one direction must entail curbing expenditures in another direction.

2.3.3 The "Degree of Openness" Hypothesis

Alongside those who considered the revenue constraint as an important determinant of government expenditures, others on the basis of their discontent with the per capita income as an index to the stage of economic development suggested that the openness of the economy may be a more relevant factor governing the behaviour of government expenditure. Three indices have alternatively been used to represent the degree of openness of an economy, (a) The ratio of imports to GNP, (i.e. $\frac{M}{GNP}$); (b) Some writers preferred the export ratio to GNP ($\frac{Ex}{GNP}$) as a better index; and (c) Yet others thought of the trade balance ratio to GNP (i.e. $\frac{M-Ex}{GNP}$) as being more relevant. However, the most commonly used index is that of the import ratio.

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56 F. Pryor, "Public Expenditure in Communist and Capitalist Nations", op. cit., pp. 441-443; see also R.A. Musgraves, op. cit., p.121.

The rational behind the importance of the foreign trade sector seems to be twofold. On the one hand, since it has been argued that the lack of availability of tax handles in developing countries may be an important limiting factor to the size of the public sector[57], it follows then that an expanding foreign trade sector will provide such handles. This is because taxing such a sector is administratively easier; politically more feasible, and to a large extent equitable. On the other hand, a more open economy may be more amendable to fluctuations and as the proportion of transitory income to total income increases, this would give rise to a higher savings rate[58].

Hinrich, in a cross-section analysis of 60 developing countries has indicated that the "degree of openness" as measured by the import ratio provides a much better index of economic development than per capita income. He contended that his findings revealed a highly significant relationship between the revenue share in G.N.P. and the import ratio for all countries with per capita income below $750. However, he reiterated that, its effect falls with a rise in per capita income[59].

Hinrich's conclusion might be something to be anticipated, as we argued earlier (p.55) that with the process of economic development there may occur a change in the composition of imports in favour of capital goods. If this takes place, then it seems reasonable to expect a decline in import duties and more emphasis be placed on direct taxes. This possible shift in the composition of imports

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57 R.A. Musgrave, Fiscal Systems, op. cit., p.119.

58 S.K. Singh, Development Economics, (London: Lexington books, 1975) p.124.
A higher transitory income may give rise not only to voluntary savings but also to compulsory savings through taxation.

59 H.H. Hinrich, "Determinants of Government Revenue Shares Among Less-Developed Countries", The Economic Journal, (Sept. 1965), pp.546-556.

and its subsequent effect on import duties may render the later to enormous fluctuations, hence, revenue generated from this source could be vulnerable. However, this element of uncertainty, though logical, does not necessarily eliminate the effect of the degree of openness of the economy on the size of the public sector, but rather may foster the seriousness of the revenue constraint on government expenditures.

2.3.4 The Displacement Effect and Other Factors

It is imperative to say that the supply orientated approach towards the explanation of government expenditure is complementary rather than a substitute to the demand orientated approach.

While criticizing Wagner's Law basically on its philosophical background, Peacock and Wisman[60] adopted his approach to provide their own hypothesis on what determines the behaviour of government expenditures. Wagner, however, was concerned with the secular growth of government expenditure with respect to G.N.P. (or any variant of income), while Peacock and Wisman were concerned with the time pattern of growth of expenditures. The displacement effect which they suggested to explain this time pattern relied basically on the occurrence of wars (or social upheavals) and, hence, on the impact of such disturbances on the prevailing notion of a tolerable burden of taxation in contradistinction to the desirable size of public expenditure. They assumed that, based on their study on the U.K. mentioned earlier, there is a shift in peoples ideas about the tolerable burden of taxation due to the occurrence of wars or social upheavals which may give rise to a shift in the level of public expenditures with respect to national income[61]. In their particular case study they found that "although British government

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60 Alan T. Peacock and Jack Wisman, The Growth of Public Expenditure in the United Kingdon, (Princeton: Princeton U. Press, 1966).

61 S.P. Gupta, op. cit. p.427

expenditure declines after the wars, it does not return to the pre-war level, ..., and the share of government expenditure in national income remains greater after the wars than it was immediately before them[62]. The above statement implies the incorporation of a reinforcing mechanism, namely a "ratchet effect", i.e. after expenditures have risen to a certain level they would not fall to their previous level. This particularly subjected the hypothesis to considerable criticism, furthermore, when the hypothesis is supplemented by the "social upheaval" concept becomes too broad and can explain almost anything. This reduces its credibility as a scientific concept.

Apart from the foregone discussed hypotheses, several other factors have been suggested to account for some of the changes in government expenditure. Martin and Lewis[63], for example, have emphasized the peoples changing conception of the state's role over time. Musgrave[64], on the other hand, stressed the importance of the political factors in determining the government expenditures. In spite of the fact that no quantification of the extent to which their effect is important, yet Bird[65] argues strongly that such factors constituted a crucial missing link in studies of government spending. Others have emphasized the degree of urbanization as an important factor on the grounds that the growth of the urban centres would eventually bring about pressures on the government to increase spending on its services to satisfy the rising demand for such services. This was further linked with the political factors in the sense that the growth of urbanization is a potential for the emergence of pressure groups which eventually brings about more expenditures to satisfy the desires of

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62 A. Peacock & J. Wisman, op. cit., pp.25-26

63 Martin and Lewis, op. cit., p.206.

64 R.A. Musgrave, op. cit.

65 R.M. Bird, op. cit. p.123.

of the community.

Moreover, ideological factors are being suggested to be of significance. However, Pryor[66] in an attempt to investigate the extent to which such factors explain differences in government expenditures has concluded that such differences are not very significant. Williamson, as well as others, considered Kuznets-Clark position that productivity lags in the public sector could be considered a factor contributing to the rising government expenditures. To maintain absolute services per head, Williamson says, would then require proportionally more expenditure[67].

Finally, the review that has been taken in this section was meant to be illustrative rather than exhaustive in order to provide generalizations on the hypotheses suggested to explain the behaviour of public expenditure.

In the following chapter we intend to examine the pattern of growth of government expenditure in Jordan and whenever possible the underlying factors behind it will be explicitly examined.

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66 F. Pryor, op. cit., p.123.

67 J.G. Williamson, "Public Expenditure and Revenue: An International Comparison", The Manchester School, vol. 29, 1961, pp.46-47.

CHAPTER THREE

PATTERN OF GROWTH OF GOVERNMENT EXPENDITURE IN JORDAN

In the previous chapter we advanced, among other things, various hypotheses that tried to explain the variations in and growth of public expenditure. The object of the present chapter, however, is to examine the pattern of growth of government expenditures in Jordan, as well as utilizing the hypotheses alluded to above in establishing the possible determinants underlying the pattern of growth of government spending. Our attention, therefore, is given first to the pattern of growth of aggregate government expenditure and the factors affecting their pattern of growth are statistically and empirically tested. In section two, the analysis is carried forward on the basis of disaggregating government expenditure by economic use, namely, current and capital expenditure. In section three, government expenditure is further disaggregated on a functional basis, hence, various functional categories of government spending are examined.

Like most studies of government expenditure, done for other countries, we had faced conceptual, and more importantly, statistical problems. In Jordan, as a developing country, there were rather more statistical problems than conceptual ones.

The expenditure time series vis-a-vis national income and other data for the period 1954-1966 pertain to both East and West Banks of Jordan, and for the period 1967-1979 (inclusive) for the East Bank only[1].

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1. Because of this break in the time series resulting basically from territorial as well as population changes, results obtained from regressions combining the two periods should be treated with some caution because of the potential bias such break may have on the results.

In order to make the expenditure and other relevant data comparable for the two periods, population changes are taken into consideration as well. Therefore, the post 1967 population figures, as well as the rest of the data, belongs to the East Bank only.

Government expenditure includes not only the purchases of goods and services but also transfers and subsidies. Although, it would have been more appropriate to include the expenditure of central government as well as those of the local authorities, yet the data used here excludes the latter owing to the paucity of the data.

Moreover, the choice of the measure of national output had fallen on G.N.P., like most other studies of our type. Others had chosen G.D.P.[2], in studies on the economic development of Jordan, on the grounds that the net factor income from abroad (which makes the difference between G.N.P. and G.D.P.) is underestimated. Although, it is true that the largest component of N.F.I. (namely immigrant remittances) is acknowledged to be underestimated due to the fact that a considerable amount of remittances is not channelled through the banking system, yet it is inappropriate to consider this a priori for using G.D.P. rather than G.N.P. given the importance of net factor income from abroad (N.F.I.) to the economy.

In view of the fact that the growth of government expenditure and national income in current prices may give an imperfect picture due to the inflationary pressures particularly after 1972, we had to choose a suitable price index to eliminate the influence of price changes and thus reflecting the magnitudes in real terms. But the elimination of prices confronted us with conceptual and statistical problems. On

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2. See Michael P. Mazur, op. cit., p.3.

the one hand, there does not exist a suitable price index. The Cost of Living index is available only for the period 1967-1979 and data for constructing an index for the whole period is scanty and highly conjunctual. Even if this index was available, it certainly is not the right deflator particularly for government expenditure. However, after careful assessment we adopted the implicit index number of prices of G.D.P. for the whole period under examination. To the best of our knowledge, this is the most appropriate, reliable and consistant price index available.

3.1 Aggregate Government Expenditure Growth and Determinants, 1954-79.

3.1.1 Permanent Effects:

Over the past quarter of a century, public spending at current prices has increased by about 30 times, i.e. increased from JD 16.6 million in 1954 to JD 495.6 million in 1979), although Gross National Product (G.N.P.) increased by only 16 times. These represent an average annual growth rate of 15.5 and 12.3 per cent for government expenditure and G.N.P. respectively, Table(3.1). While these rates of growth have been neither identical nor steady, they have nevertheless followed a similar pattern - sluggish in the early sixties, exceedingly rapid in the early seventies.

It has been argued, that the increased government expenditure may be attributed to the rising of per capita income. More specifically, it may be argued that there is a functional relationship between per capita expenditure and per capita income, i.e. $(\frac{G}{P}) = f\ (\frac{GNP}{P})$, and the income-elasticity of the demand for public spending is positive and exceeding unity. To test this relationship, three functional forms were used, i.e. simple linear, double-log, and semi-log. Both the simple linear and double-logarithmic forms fit the data, however, the simple linear form fits the data best, the estimated equation is

Table (3.1)

Average Annual Rates of Growth of Government Expenditure at Current and Constant (1972) Prices, and Per Capita G.N.P., 1954-1979 (Per cent)

	1954-59	1960-66	1954-66	1967-72	1973-79	1967-79	1954-79
(1) Gov. Expenditure (current prices)	11.1	4.6	7.6	20.8	25.7	23.4	15.5
(2) Gov. Expenditure (constant prices)	10.0	1.1	5.2	17.0	6.1	11.2	8.2
(3) Per Capita G.N.P.	7.8	6.1	7.5	7.0	17.8	12.8	10.2

Source : Appendix Table ( ).

$$\left(\frac{G}{P}\right)_t = \underset{(27.60)}{-16.78 + 0.58 \left(\frac{Y}{P}\right)_t} \qquad (1)$$

$R^2 = 0.97$ DW = 1.75 DF = 24

where,

$\left(\frac{G}{P}\right)_t$ is per capita government expenditure

$\left(\frac{Y}{P}\right)_t$ is per capital G.N.P., and

value in parenthesis is the t-value.

Evidently, equation (1) indicates a significant association between per capita government expenditure and per capita G.N.P.[3] as is reflected by the high t-ratio which is significant at the 1% level.

The income-elasticity of government expenditure from the above linear form, was calculated by dividing the mean of the independent variable $\left(\frac{Y}{P}\right)_t$ by the mean of the dependent variable $\left(\frac{G}{P}\right)_t$ and the result multiplied by the regression coefficient, in functional form the elasticity is given by,

$$E_{\left(\frac{Y}{P}\right)_t} = \frac{\left(\frac{Y}{P}\right)_t \cdot \beta}{\left(\frac{G}{P}\right)_t} \qquad (2)$$

Accordingly, the income elasticity of government expenditure is well

3 It is worth noting here that the data used in all the calculations in this chapter are in current prices unless otherwise indicated.

above unity (1.29). This indicates that a one percentage point increase in per capita income is accompanied by a 1.29 percentage point increase in per capita government expenditures, that is, along with the increase in per capita income public spending increases at a faster rate. This faster rate of growth raised the share of public expenditure in total output (GNP), therefore indicating that during the course of economic development the public sector encroaches upon the private sector through the fattening of the bureaucratic machine of the government. This is born out by a strong relationship between per capita income and the ratio of government expenditures. However, the original equation testing this relationship had a low DW-statistic signifying the existence of autocorrelation. When the data was subdivided into two periods to represent all Jordan prior to 1967 and the East Bank (after 1967 Jordan), the results were not much different, yet the income-elasticity of government expenditure ratio has increased considerably in the second period with improvements in both t-ratio as well as the R^2. The derived equations read as follows:

$$1954\text{-}1966 : \log\left(\frac{G}{Y}\right)_t = 0.33 + \underset{(7.60)}{0.62} \log\left(\frac{Y}{P}\right)_t \qquad (3)$$

$$R^2 = 0.84 \quad DW = 1.27 \quad DF = 11, \quad \text{and}$$

$$1967\text{-}1979 : \log\left(\frac{G}{Y}\right)_t = 1.42 + \underset{(18.35)}{1.14} \log\left(\frac{Y}{P}\right)_t \qquad (4)$$

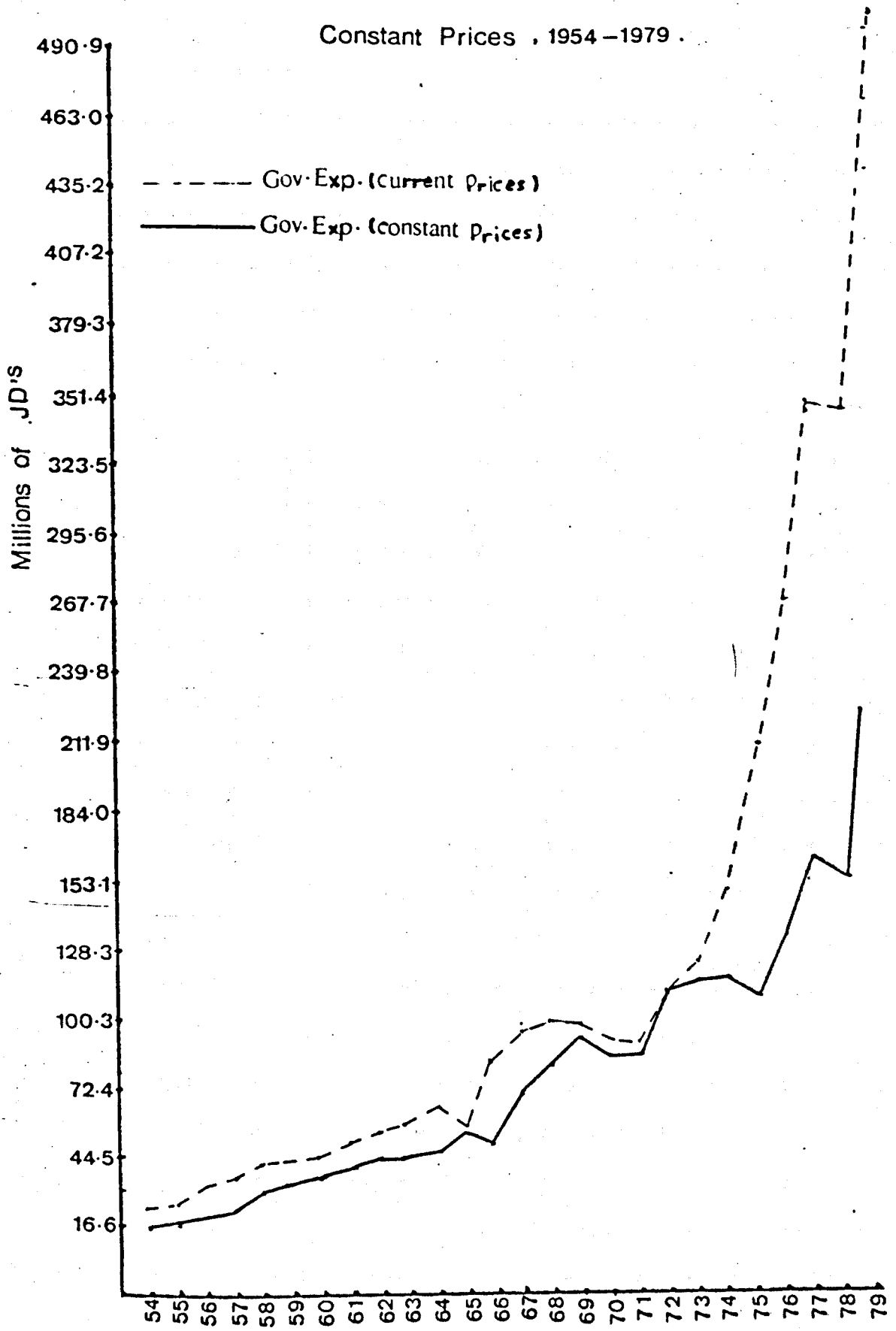
$$R^2 = 0.97 \quad DW = 1.11 \quad DF = 11$$

where $\frac{G}{Y}$ = is expenditure ratio to GNP; and $\left(\frac{Y}{P}\right)$ per capita GNP.

The considerable increase in the elasticity in the second period may be due to two main reasons. On the one hand, the government has to pay for the cost of the war, and such a result rough as it may be, may confirm the existence of a "displacement effect" due to the war. On the other hand, the second period includes the effect of the inflationary pressures which led to overstating government expenditures.

However, taking into consideration the effect of prices may give a clearer picture. Figure (3.1) depicts the pattern of government expenditure in current and constant (1972) prices. During the period 1954-1966, both magnitudes followed a similar pattern, a result which is to be expected due to the fact that Jordan enjoyed a relative price stability, as was discussed in chapter one.

Figure (3·1) Government Exp. at Current & Constant Prices , 1954–1979 .



Source: Appendix Table (5) .

However, after 1967 government expenditure increased considerably, both in current as well as in constant prices. This pattern of growth continues up to 1972. As of 1972, expenditures in current prices showed an exceedingly rapid increase, i.e. increased from JD 105.9 million in 1972 to a record high of JD 495.6 million in 1979, an average annual rate of growth of 25.7 per cent. On the other hand, expenditure in constant prices showed a modest rise, increased from JD 105.9 million in 1972 to JD 239.4 million in 1979, an annual rate of growth of 6.1 per cent. Accordingly, a vast gap, widening over time, took place between current and real expenditure during the said period.

Such an observation is not in itself surprising, but in fact meaningful in reflecting the real growth of government expenditure. The most obvious effect of the inflationary pressures was to overstate the government expenditure data, since the government was obliged to increase expenditure in current terms just to maintain real levels of purchases and transfers. This might further be reflected in an increase in particular functional types of expenditure such as administration and social services, as will be discussed shortly. Certainly there are other effects of prices on the public spending such as the changes in income distribution and in turn their resulting effects on the tax base. However, like most developing countries, data on income distribution in Jordan is simply non-existent.

Population might be another factor which exerts a permanent effect on government expenditure, though such effect is difficult to ascertain. Generally there is no a priori reason as to why government expenditure should rise with population rises, except for the fact that an increase in the percentage of dependent population to total population may induce more government expenditure in certain areas. Although some of the functional types of government expenditure are not elastic with population

increases such as defence expenditures, yet some others are expected to increase with population increases particularly the social type expenditure, i.e. health and education[4]. In fact others went further to suggest that the per capita public goods must increase as population increases, coupled with the an above unity national income elasticity of total public expenditure, if expenditure ratio is to rise with per capita income[5].

As was argued earlier in chapter one, Jordan was subject to drastic population changes which could approximate the effects of population rises on public spending. During the period 1954-66, Jordan's total population grew by 44.6%, while during the period 1967-79 it grew by 107%. This is obviously not due to the natural rate of growth which is estimated at 3.1-3.4% annually, a rather high one. But more importantly, it is due to the movement of people caused by the 1948 and 1967 wars.

Moreover, the composition of population tends to be concentrated in the young age groups as Table (3.2) below reveals. In 1972, for example, 70% of the population were in the age groups below 24 years of age, 43.4% of which were in the age group 6-14.

It is not surprising then to find the largest part of the population in schools. This distribution of population inevitably puts pressure on certain government expenditures in areas like education and health in particular.

Concurrent with these high rates of population growth, immigration, and composition of population as described above, there has also been a growing trend of urbanization as evidenced in (Table 1.1, p.6). The percentage of people living in urban areas has increased from 51.5% in

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4 Irving J. Coffman & Dennis J. Mohar, "The Growth of Public Expenditure in selected Developing Nations : Six Caribbean Countries, 1940-65", Public Finance, vol. 26. 1971, pp.57-74.

5 For a detailed mathematical treatment see Ved. P. Ghandhi, Wagner's Law of Public Expenditure, op. cit., p.50.

Table (3.2)

Percentage Distribution of East Bank Population by Age-Groups, 1961 and 1972

(Percentage)

Age-group \ Year	1961	1972
5 and less	21.4	22.8
6 - 14	24.1	30.4
15 - 24	19.6	16.8
25 - 34	12.9	11.1
35 - 44	8.6	8.3
45 - 64	9.6	8.1
65 and over	3.8	2.5

Source : (i) Dept. of Statistics, First Census of Population and Housing. (Amman : 1961)

(ii) Dept. of Statistics, Multipurpose Household Survey, Jan.-April, 1972. (Amman : June 1974).

1961 to 79% in 1972, while that of the rural areas decreased from 39.5% to 21% respectively. Thorn remarked in this respect that "it is an almost universally observed circumstance in almost all nations of the world that urban population benefit from a larger sum of social expenditure per capita than the rural population"[6]. Therefore, the observed rising proportion of urban population to total population accompanying development, all other things being equal, alone is sufficient to raise the relative level of public expenditure.

Apparently, the population changes in Jordan approximate the conditions which may cause an increase in government spending. However, the precise population effect upon the aggregate level of government expenditure is uncertain. Yet to estimate this influence, government

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6 R.S. Thorn, "The Evolution of Public Finances During Economic Development", The Manchester School, vol. xxxv, 1967, pp.19-51.

expenditure were converted into per capita terms. Figure 3.2 shows that during the period 1954-1966 the pattern of per capita expenditure in current and constant prices was not significantly different from that of the total government expenditure. However, significant variations in the time pattern took place during 1966-68, a period which is marked by considerable population changes. Once these changes had subsided after the 1967 war, per capita expenditure dropped until 1971 during which it picked up again. After 1972, and similar to that of the aggregate pattern of expenditure, a vast gap appeared between the current and real per capita expenditure.

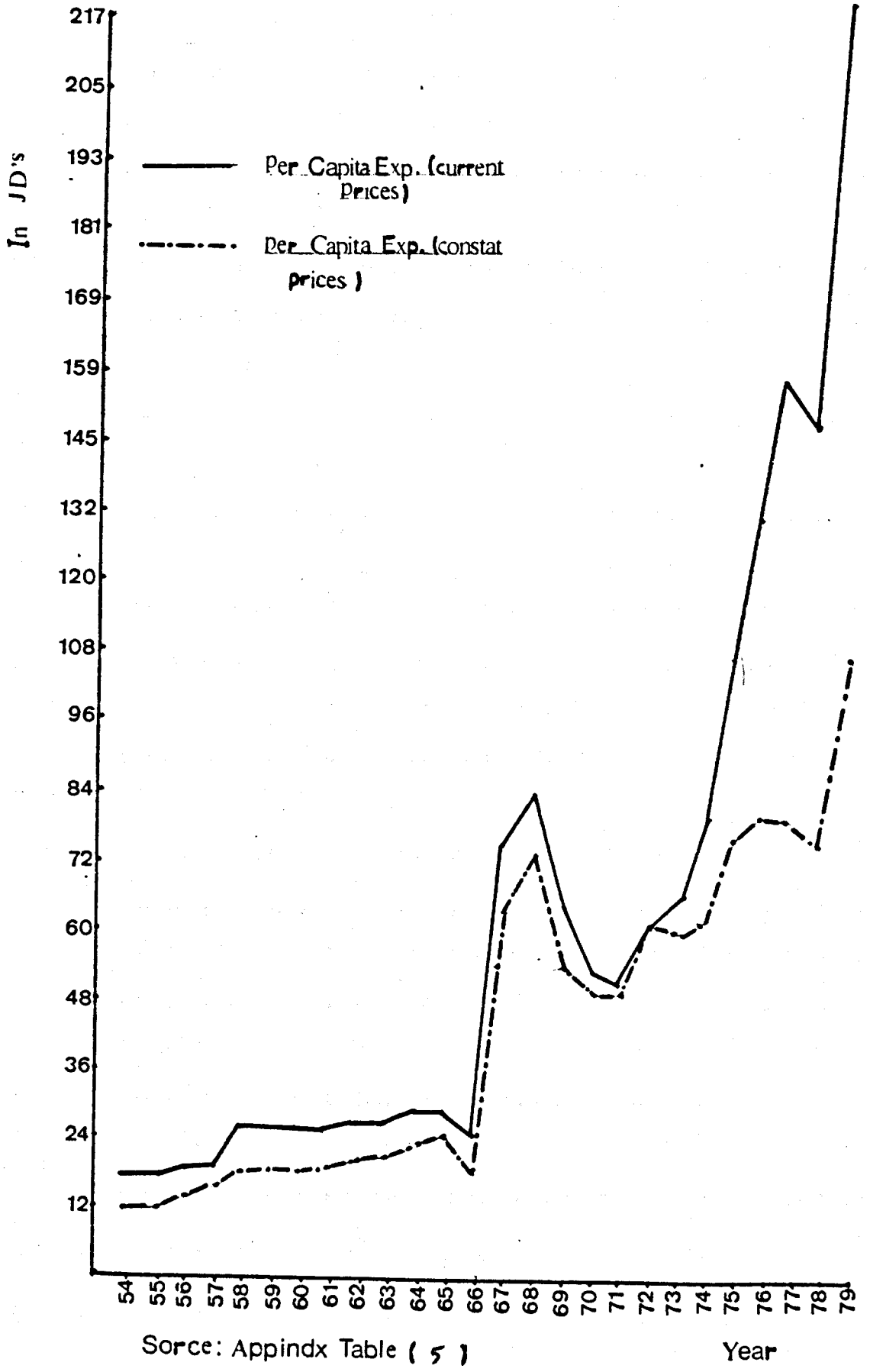
The removal of the two permanent influences, namely, population and prices, on expenditure brings out two important points : one is with respect to secular growth, and another with respect to the time pattern. As far as the former is concerned, removal of the population and price influences does not negate the hypothesis of an above unity income elasticity of government expenditure. Regarding the time pattern of expenditure growth, it is noticeable that both influences affect the trend.

However, such influences are obviously not enough to explain the behaviour of government expenditure. A changing pattern of government expenditure in certain periods may be attributed to some factors other than those of the prices and population. For example, the presence of a peak right after 1967, despite removing the permanent influences infer that it may be due to military and other war related expenditure. Therefore, other explanations are needed to be taken into consideration.

3.1.2 The "Degree of Openness" of the Economy

The "degree of openness" of the economy measured by the import ratio, as enunciated by H. Hinrichs, and later discussed by many others, to explain the variations in the share of the government in the national

Fig. (3-2) Goverment Per Capita Exp. (Current & Constant 1972 prices) . 1954 – 1979 .



Sorce: Appindx Table (5)

income has been mainly subjected to cross-section analysis. The importance of the size of the foreign trade sector stems basically from its detrimental effect of taxable capacity of the economy, hence, by virtue of its effects on the revenue shares in developing countries. As has been argued before, taxes on foreign trade (that is, import and export duties) are administratively easier. Such taxes are also thought to be more equitable because of the distribution of their burden on the population. Moreover, there could be - and in fact it is more often so - a distinction between luxury goods and the more essentials, therefore there exists a kind of selective taxation in favour of the poor vis. a vis. the well-to-do. More importantly, the relative size of the foreign trade sector is considered a fairly good indicator of the degree of monetization of the economy. Furthermore, it is argued that the foreign trade sector has a spill-over effect on the other sectors of the economy, through which it increases the transitory income which in turn raises the government revenues. To recapitulate, the basic argument behind the relevance of the foreign trade sector to government spending stems basically from its role and effect on the government revenue shares which presumably allow for more government expenditure.

We shall use imports as a ratio to G.N.P., as our measure of the openness, simply because it reflects, much better, the size of the foreign trade sector than exports. Therefore, import ratio is used as an explanatory variable for the share of government expenditure in G.N.P. in Jordan. Both linear and non-linear transformation were used to detect the type of association between the two variables.

In the (simple) linear regression there is a significant association between the import ratio and the expenditure ratio. The t-value is significant at the 1% level, and the import ratio explains slightly above 60 per cent of the variations in the expenditure ratio as measured

by the (R^2) of the regression.

The equation that gave these results reads as follows,

$$\left(\frac{G}{Y}\right)_t = 2.99 + 0.74 \left(\frac{M}{Y}\right)_t \qquad (5)$$

$$(6.08)$$

$$R^2 = 0.61 \qquad DW = 1.27 \qquad DF = 24$$

where, $\left(\frac{G}{Y}\right)$ is the expenditure ration to G.N.P.

$\left(\frac{M}{Y}\right)_t$ is the import ratio to G.N.P.

and, the value in parenthesis is the t-value

However, introducing a non-linear transformation in the form of log-log and semi-log respectively has not given a better fit to the data. Yet the association between the two variables was still significant. The two forms are given by,

$$\text{Log}\left(\frac{G}{Y}\right)_t = -0.05 + 0.95 \log\left(\frac{M}{Y}\right)_t \qquad (6)$$

$$(5.43)$$

$$R^2 = 0.55 \qquad DW = 1.21 \qquad DF = 24$$

$$\left(\frac{G}{Y}\right) = -107.8 + 38.03 \log\left(\frac{M}{Y}\right)_t \qquad (7)$$

$$(6.03)$$

$$R^2 = .60 \qquad DW = 1.29 \qquad DF = 24$$

Although, the DW-statistics in equation (5) above lies in the critical region whereby one cannot tell whether an autocorrelation problem is at work, again a dummy variable for the effect of 1967 events was introduced and gave a better result. Although a drop in the t-value took place, it was still significant at the 1% level of confidence and it gave a much better DW-statistic ruling out the effect of auto-correlation if it existed. The results of this test is given by equation (8) below,

$$\left(\frac{G}{Y}\right)_t = 15.26 + 0.34 \underset{(4.09)}{\left(\frac{M}{Y}\right)_t} + 14.6 \underset{(7.57)}{D} \qquad (8)$$

$$R^2 = 0.89 \quad DW = 1.67 \quad DF = 23$$

Furthermore, combining the import ratio and per capita G.N.P. in a multiple regression model gave a better result than that of equation (5) above, measured by an improved (R^2), hence explaining relatively larger percentage of the variation in the expenditure ratio. Both the import ratio and per capita G.N.P. remained significant in explaining the variation in government expenditure ratio. The double-log form gave the best fit as given by equation (9),

$$\text{Log}\left(\frac{G}{Y}\right)_t = 0.39 + 0.15 \underset{(3.97)}{\log\left(\frac{Y}{P}\right)_t} + 0.66 \underset{(2.59)}{\log\left(\frac{M}{Y}\right)_t} \qquad (9)$$

$$R^2 = 0.63 \quad DW = 1.27 \quad DF = 23$$

By and large, from the above tests we can infer that the import ratio $\left(\frac{M}{Y}\right)_t$, when applied to given country, as is the case here for Jordan, is an important factor in G.N.P.

It has been argued however, that with the process of economic development the importance of the foreign trade sector in explaining the expenditure ratio declines. The explanation given for this inference relied on the fact that the composition of imports changes in favour of capital goods, necessary for development, on which there is little taxes, if any. This argument may be valid to a certain extent, but the fact remains that other imports increase as well. However, to test this contention, data for the period 1967-1979 was separated and the results reached were not significantly different from those reported above. For comparison purposes, all the results are reported in Table (3.3) below.

Table 3.3. Summary of Regression Results

Period	Dependent variable	Independent variable(s)	Coefficient	t-Statistics	Durbin-Watson Statistics	R^2	Degrees of Freedom	Type of Regression
1954-1979	$(\frac{G}{P})_t$	$(\frac{Y}{P})_t$	0.58	27.6	1.75	0.97	24	linear
1954-66	$(\frac{G}{Y})_t$	$(\frac{Y}{P})_t$	0.62	7.60	1.27	0.84	11	log-log
1967-79	$(\frac{G}{Y})_t$	$(\frac{Y}{P})_t$	1.14	18.35	1.11	0.97	11	log-log
1954-79	$(\frac{G}{Y})_t$	$(\frac{M}{Y})_t$	0.74	6.08	1.27	0.61	24	linear
1954-79	$(\frac{G}{Y})_t$	$(\frac{M}{Y})_t$	0.95	5.43	1.21	0.55	24	log-log
1954-79	$(\frac{G}{Y})_t$	$(\frac{M}{Y})_t$	38.03	6.03	1.39	0.60	24	Semi-log
1954-79	$(\frac{G}{Y})_t$	$(\frac{M}{Y})_t$, D	0.34, 14.6	4.09, 7.57	1.67	0.89	23	linear
1954-79	$(\frac{G}{Y})_t$	$(\frac{M}{Y})_t$, $(\frac{Y}{P})_t$	0.66, 0.15	2.59, 3.97	1.27	0.63	23	log-log
1954-79	$(\frac{G}{Y})_t$	$(\frac{G}{Y})_{t-1}$, $(\frac{G}{Y})_{t-2}$	0.67, 0.06	3.88, 0.40	0.80	0.79	23	linear
1954-79	$(\frac{G}{Y})_t$	$(\frac{G}{Y})_{t-1}$, $(\frac{G}{Y})_{t-2}$, D	0.44, -0.07 11.6	2.99, -0.62 3.80	1.15	0.88	22	linear
1954-79	T	Y	1.27	35.12	1.27	0.98	24	log-log
1954-79	N	Y	0.35	17.7	2.18	0.93	24	linear

Note : For the definition of the variables see the text.

3.1.3 Past Levels of Government Expenditure

We have argued earlier in this section that one of the explanations of the rising of government spending may be due to the fact that the government needed to keep up the previous level of its expenditures. This in essence means that current year government expenditure may be conditioned by previous levels attained. This is a behavioural explanation analogous to that explaining the consumption behaviour. It seems plausible to assume that certain government expenditures, particularly current expenditure, can be regarded as the public consumption, therefore should be affected by their level which was attained in previous years. If this is the case, then this will give rise to current year government expenditures and hence, one can infer that current year government expenditures are, at least partially, explained by levels attained in the previous period.

This means that government expenditures are rigged downward in the sense, at least, that the levels of such expenditures achieved in the previous years will be maintained. However, it could be argued that if certain pressures are exerted on the levels of expenditures (say a revenue constraint) for a reasonably long period of time, inevitably expenditure has to be reduced. In practice, however, such a strong and prolonged pressure to reduce government spending below the level achieved in previous years do not take place except in certain extreme cases.

In order to test this hypothesis we have assumed that government expenditure ratio in the current year is associated with lagged expenditures for one and two years respectively. The results arrived at read as follows:

$$\left(\frac{G}{Y}\right)_t = 11.6 + \underset{(3.88)}{0.67}\left(\frac{G}{Y}\right)_{t-1} + \underset{(0.40)}{0.06}\left(\frac{G}{Y}\right)_{t-2} \qquad (10)$$

$$R^2 = 0.79 \qquad DW = 0.80 \qquad DF = 23.$$

where,

$(\frac{G}{Y})_t$ is the share of Gov. Exp. in G.N.P. in the current year

$(\frac{G}{Y})_{t-1}$ the share of Gov. Exp. lagged one year

$(\frac{G}{Y})_{t-2}$ the share of Gov. Exp. lagged two years, and

values in parenthesis are the t-values

The results reported above indicate that government expenditure ratio is positively and significantly related to that of the previous year, but not related to that lagged two years as explained by the respective t-ratio. The relaxation of the linearity formulation into a non-linear transformation did not improve the fit of the data, however, the same association between the three variables was maintained.

Moreover, it is clear that the low DW-statistic indicates a positive autocorrelation. Using the method of first difference did not materialize in any significant improvement, yet introducing a dummy variable to check for the effect of 1967 events again gave a better result. Although it increased the DW-statistic to 1.15 it nevertheless was within the critical region whereby one cannot rule-out completely the existence of a positive autocorrelation or otherwise. The results are given by the following equation (11).

$$(\frac{G}{Y})_t = \underset{}{19.57} + \underset{(2.99)}{0.44}\,(\frac{G}{Y})_{t-1} \underset{(-0.62)}{-0.07}\,(\frac{G}{Y})_{t-2} + \underset{(3.80)}{11.60}\,D \qquad (11)$$

$R^2 = 0.88 \quad DW = 1.15 \quad DF = 22$

where the variables are as defined before.

Clearly, the introduction of the dummy variable reduced the significance of $(\frac{G}{Y})$ lagged one year, yet it was still significant at the 1% level of confidence.

One rationale for maintaining the previous level of expenditure

may be mere adherence to habit. It may also be due to a commitment on the part of the government to a certain level of expenditures, particularly certain types thereof, whereby it may be politically undesirable to have such expenditures reduced. Furthermore, it could also be argued in the case of Jordan that the continuous inflow of resources from abroad may have created a built-in inflexibility in government expenditures which made them rigid downward. This may be more pronounced in connection with defence expenditure in which, at least part, of those resources must be spent. This leads us to consider whether a revenue constraint on government spending does exist.

3.1.4 Revenue Constraint

While the demand orientated hypothesis linked the pattern of growth of government expenditures to the level of economic development as measured by national income, it is argued that government spending is conditioned by the ability of the government to raise the necessary revenues. In other words, government's expenditure growth and behaviour depends to a large extent on the income elasticity of the revenue system of the country. The income elasticity of public expenditure, therefore, depends on a combination in this respect. These are, the income elasticity of tax revenue (e_t), the level of non-tax government receipts, including domestic and foreign debts, and the income elasticity of non-tax receipts. Each of these variables has its own effect on government expenditure through its effect on the level of revenue availability, but this effect is more important when all variables are combined together and their collective effect on raising revenue is considered, and by virtue of the relationship between revenue and expenditure, their impact on the income-elasticity of public spending.

In an illuminating article, Ghandi[7] provided the theoretical relationship between the above mentioned variables and the elasticity of

7. Ved. P. Ghandi, op. cit., pp.44-56

government expenditure, assuming a balanced budget, we have:

$$G = T + N$$

$$\Delta G = \Delta T + \Delta N$$

$$\Delta G = \frac{\Delta T}{T} \cdot T + \frac{\Delta N}{N} \cdot N$$

$$= e_t \cdot \frac{\Delta Y}{Y} \cdot T + e_n \cdot \frac{\Delta Y}{Y} \cdot N$$

where, G = Aggregate Gov. Expenditure

T = Total Tax Revenue

N = Non-Tax Government receipts

e_t = income elasticity of tax revenue

Y = G.N.P. (or any variant of income)

e_n = income elasticity of non-tax Gov. receipts

now,

$$\frac{\Delta G}{G} = \frac{\frac{\Delta Y}{Y}(e_t \cdot T + e_n \cdot N)}{G}$$

$$e = \frac{e_t \cdot T + e_n \cdot N}{G}$$, where e = is the income-elasticity of Gov. expenditure.

Therefore,

$$e = \frac{e_t \cdot T + e_n \cdot N - e_t \cdot N + e_t \cdot N}{G}$$ or,

$$e = e_t - (e_t - e_n)\frac{N}{G} \qquad (12)$$

Assuming that, $N > o$, $\frac{N}{G} < 1$ and $e_t > e_n$. Taking these conditions into consideration obviously, the income-elasticity of government expenditure (e) would be less than that of the tax-revenue (e_t).

When the different sources of revenues are examined, one could expect to find that the non-tax receipts are far more important in developing countries than that of the tax receipts. As we argued earlier in chapter two, this is mainly due to the fact that generally the tax system fails

to provide the necessary revenues for the financing of government activities. The reasons for this presumed low performance of the tax-system in these countries, are a mixture of socio-economic and political factors, such as the low level of income, the degree of monetization of the economy etc., and several other factors which collectively and separately affects the taxable capacity in the country. In such a case, which is more often so, developing countries resort to either deficit financing and/or foreign aid, which of the two sources is more important actually depends on the particular circumstances of each developing country. However, due to the limitations on the domestic economy to raise the necessary financing be it due to the factors alluded to above or merely to the absence of an institutional network, particularly financial and money markets, developing countries are bound to depend on foreign financing. In the case of Jordan, at least, this was the case. Foreign receipts form the single most important channel of resources which account for more than 50 per cent of government revenue (see Table (7.1), page 281. These resources constitute budget-support ., an out-right supplement to the government budget, technical and economic assistance and foreign loans. Actually, Jordan might be considered a rare case in this respect among developing countries. Few countries, either in the Middle East or elsewhere in the world, could be classified in the same category as that of Jordan's in this respect.

It is therefore, not surprising to argue that government expenditures are bound to be subject to the effect of the level and availability of non-tax revenues. More importantly, the fluctuations in the level of foreign receipts as the main source of non-tax revenues may explain, more than anything else, the behaviour and level of government expenditures.

Accordingly, when the elasticities of tax and non-tax receipts are considered as explained above, one finds that their effect on the

income-elasticity of government expenditures is profound. The elasticities of tax and non-tax revenues are calculated from the following equations, both of which gave the best fit of the data.

$$\text{Log } T = -3.47 + 1.27 \log Y \qquad (13)$$

$$(35.12)$$

$$R^2 = 0.98 \quad DW = 1.27 \quad DF = 24$$

$$N = 9.52 + 0.35\ Y \qquad (14)$$

$$(17.70)$$

$$R^2 = 0.93 \quad DW = 2.18 \quad DF = 24$$

where, T = Total tax revenue

N = Total non-tax revenues (including foreign aid and foreign and domestic borrowing).

Y = Gross National Product, and

values in parenthesis are t-ratio's.

Clearly, equation (13) indicates that the income-elasticity of tax-revenue is slightly above unity (1.27), however, given that the linear-form fitted the data best for the non-tax revenue, their income elasticity was calculated using formula (2) page[74], and accordingly was found to be less than that of tax revenue standing at (1.14). Moreover, utilizing the functional relationship between the income-elasticity of government expenditures and the other three variables as described in equation (12) above, confirms the low level of income-elasticity of government spending as given by,

$$e = e_t - (e_t - e_n)\left(\frac{N}{G}\right) = (1.13)$$

where $\left(\frac{N}{G}\right)$ is an average annual for the whole period 1954-1979.

Apparently, the expenditure elasticity is slightly above unity. Evidently, both tax and non-tax revenues have contributed to this low

income-elasticity of government spending. Calculating the income-elasticities of (e_t), (e_n) and (e) on a year to year basis for the whole period 1955-1979, Table (3.4) suggests also the existence of a revenue constraint. There appears also a correlation between the (e_t) and (e_n), in the sense that whenever (e_n) increases (e_t) increases as well, and both have their effect reflected in a higher income elasticity of government expenditure, however the latter was above unity only relatively in a few years out of the 25 years examined. This further suggests that government expenditures are constrained to a considerable degree by the availability of foreign receipts as suggested earlier. As figure (3.3) demonstrates, without foreign resources the government could by no means afford to keep its expenditures to the extraordinary levels they reached.

Apparently, foreign receipts continued rising over time with the rising government expenditures. Not only this, but the secular growth of both magnitudes was to a large extent identical. For example, in the period immediately after 1967 the rising foreign revenues allowed more government expenditure on the aggregate level where the government had to pay for the war costs, while during the period 1967-1970 which is marked by the civil strife the cuts in foreign receipts were eventually accompanied by a drop in government expenditures.

The seriousness of the revenue constraint stems from the fact that it is exogenous to the economy. Foreign receipts, be it grants or foreign loans, are conditioned by the political and military situation in the area, as well as the interests of the donor countries particularly related to the budget support, hence they can hardly be accounted for by economic factors.

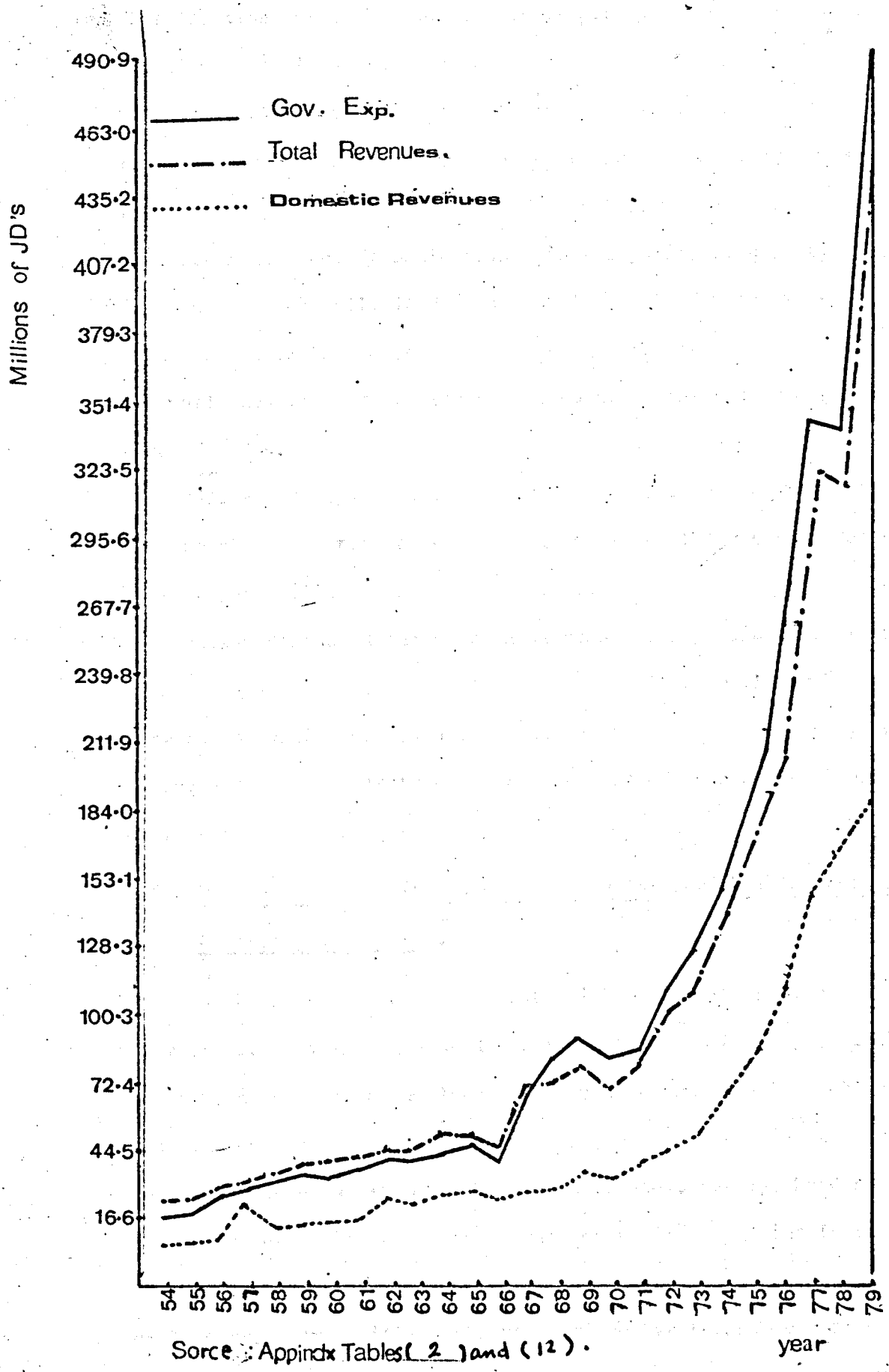
This exogenity of the factors stems from foreign receipts and may render government expenditures to wide fluctuations according to that of the former. More importantly, it governs the level of government

Table 3.4. Year to Year Income-Elasticity of Tax Revenue, Non-tax Revenue, and Government Expenditure, 1955-1979

Year	e_t	e_n	$(\frac{N}{G})$	e
1955	-2.21	0.53	0.99	0.50
1956	0.21	0.30	0.92	0.29
1957	6.66	7.41	0.97	7.38
1958	0.99	1.76	0.94	1.71
1959	1.23	0.03	0.89	0.11
1960	0.59	-0.45	0.81	-0.25
1961	0.44	0.12	0.82	0.18
1962	3.45	4.86	0.83	4.62
1963	0.39	-0.45	0.70	0.19
1964	-1.45	-3.26	0.81	3.67
1965	2.16	0.02	0.71	0.65
1966	-4.67	-5.88	0.77	3.45
1967	-0.06	0.99	0.30	0.25
1968	0.31	5.44	0.70	3.90
1969	0.55	0.08	0.65	0.24
1970	0.92	1.86	0.65	1.53
1971	1.25	3.34	0.78	2.88
1972	1.78	2.14	0.77	2.05
1973	2.15	0.53	0.71	1.00
1974	1.32	1.46	0.72	1.42
1975	1.05	1.06	0.73	1.04
1976	0.93	-0.46	0.46	-0.29
1977	1.95	4.16	0.65	3.38
1978	0.35	-0.29	0.63	-0.05
1979	0.92	2.15	0.65	1.94

Source : Appendix Table (12).

Fig.(3-3) Gov. Exp., Total & Domestic Revenues.



Sorce : Appindx Tables(2)and (12).

expenditures on the aggregate level, as well as affecting the pattern of allocations of such expenditures either by economic use or by function, as will shortly be explained.

It is therefore imperative to conclude with reasonable confidence that the revenue constraint, inter alia, may be the single most important factor in explaining the pattern of growth and behaviour of government expenditures. Any dramatic change in the political situation, which in turn may eventually lead to a drastic cut in foreign receipts may create havoc in the functioning of the government, therefore jeopardizing the whole development efforts of the country achieved during the past three decades.

Understandably, this calls for more efforts on the part of the government for a greater reliance on domestically generated revenues if such possibilities are to be avoided.

Having discussed the pattern of growth and possible determinants of aggregate government expenditure, our analysis will now be carried forward to examine the data from another point of view, namely, on a disaggregated basis as to economic use (current and capital) and different functional forms of government expenditures.

3.2 Government Expenditures by Economic Categories : Current and Capital Expenditures.

In the previous section we established that the pattern of growth of aggregate government expenditures was affected by many variables, however, no one variable alone could explain the behaviour of government spending on the aggregate level. Here, we shall examine the data on government spending from another point of view, namely, by disaggregating government expenditures by their main economic categories (current and capital expenditures). After all, the allocation of government spending as to current or capital reflects, among other things, government's

policy. Expenditures so classified depend on the budgetary definition as to what is current and what is capital expenditures.

The Trade-off among these two groups may give us further insight into the behaviour of aggregate government spending as well as reflecting the attitude of the government towards the role of the state in the development of the country.

3.2.1 Current Expenditure

As Table (3.5) demonstrates, current expenditures formed well above three quarters of aggregate government expenditures during the period 1954-1966. However, a significant change in the share of current expenditures took place over the said period. It declined from 83.0 per cent during 1954-61 to 78.5 per cent during 1962-66. This change might be explained by the fact that in the latter period the first development plan was launched, therefore emphasis was placed on capital expenditures. The share of current expenditures was again declining during 1973-79, due mainly, apparently to the same reason because during this period two development plans were taking place.

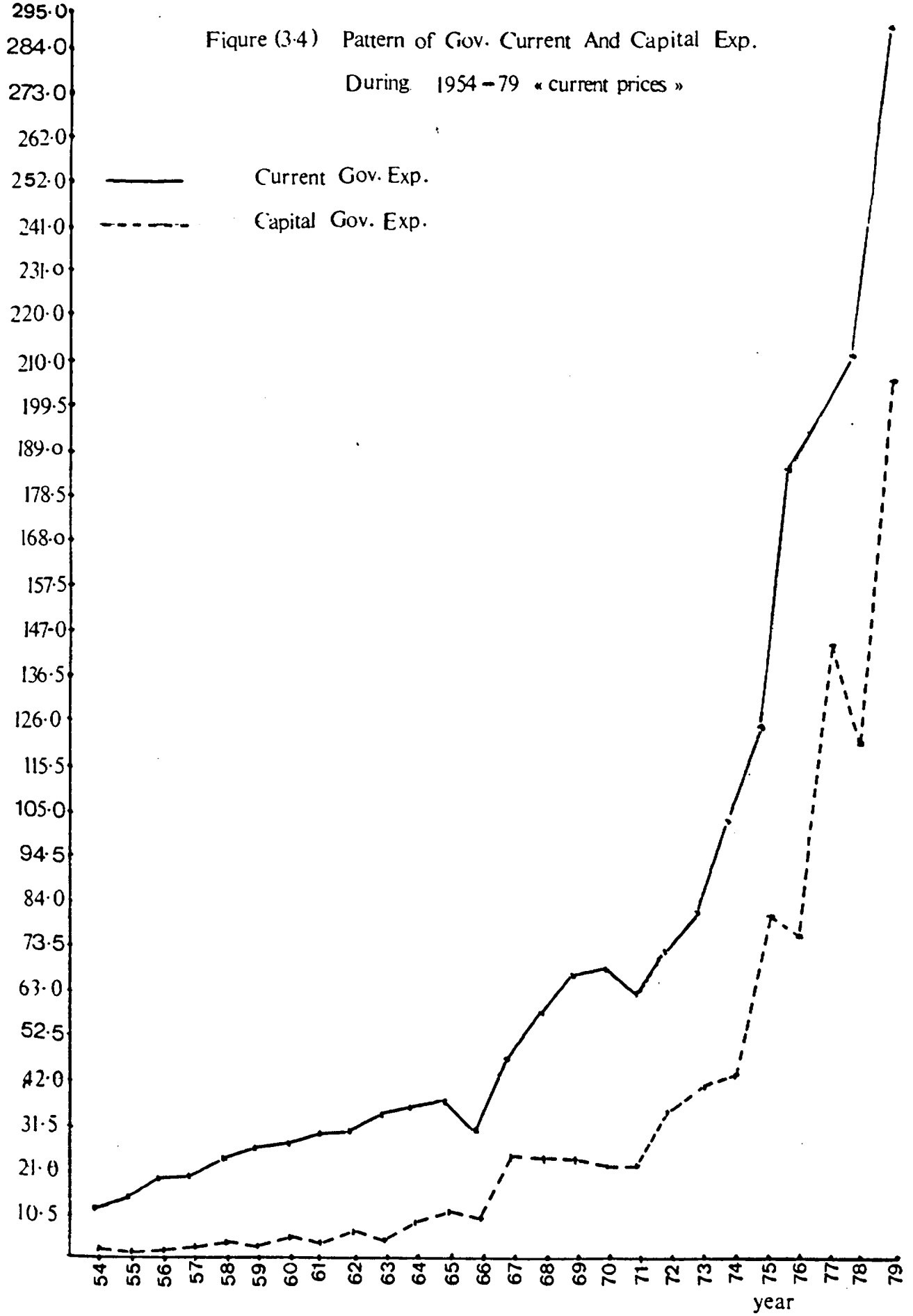
The pattern of growth of current expenditures in absolute terms followed a path similar to that of aggregate government expenditures. As figure (3.4)shows, up to 1966 a modest increase is observed with an average annual rate of growth of 7.6 per cent. However, as of 1966/67 current expenditures increased in absolute terms from JD 28.2 million in 1966 to JD 65.2 million in 1969, coupled with an average annual rate of growth of 33 per cent. Moreover, as of 1970 an extraordinary increase took place ranging from JD 60.7 million in 1970 to a record high of 291.5 million in 1979, an average annual rate of growth of 21 per cent during the period after 1967. Table 3.4.

This considerable increase in current expenditures particularly during the mid 1970's may be accounted for by three different reasons.

Table 3.5. Current and Capital Expenditures, Rate of Growth and share in Aggregate Government Exp., 1954-1979.

Year	Current Expenditures		Capital Expenditures		Year	Current Expenditures		Capital Expenditures	
	Rate of Growth	% of Total Exp.	Rate of Growth	% of Total Exp.		Rate of Growth	% of Total Exp.	Rate of Growth	% of Total Exp.
1954	5.7	80.5	16.0	19.5	1967	38.1	65.5	126.8	34.5
1955	11.5	84.3	-14.4	15.7	1968	28.1	71.0	-6.9	29.0
1956	22.8	85.6	10.9	14.4	1969	14.1	73.8	-7.0	36.2
1957	7.1	82.0	40.4	18.0	1970	-9.5	73.1	16.3	26.9
1952	20.3	80.2	35.3	19.8	1971	2.8	73.0	3.5	27.0
1959	10.1	84.4	-17.6	15.6	1972	15.8	66.5	54.0	33.5
1960	3.7	81.8	24.7	18.2	1973	11.8	65.8	18.3	34.2
1961	4.1	85.0	-17.4	15.0	1974	31.8	70.7	5.2	29.3
1962	6.7	79.7	53.9	20.3	1975	21.3	61.4	84.0	38.6
1963	20.9	84.4	-19.0	15.6	1976	47.9	70.8	-3.3	29.2
1964	3.8	79.0	48.9	21.0	1977	5.2	57.9	85.7	42.1
1965	3.9	76.2	22.0	23.8	1978	7.9	63.4	-14.5	36.6
1966	-21.1	73.2	-7.3	26.8	1979	38.1	58.8	67.8	41.2
Average 1954-1966	7.6	81.3	13.6	18.7	Average 1967-1979	21.0	67.0	31.3	33.0

Fiqure (3·4) Pattern of Gov. Current And Capital Exp.
During 1954 – 79 « current prices »



source: Table (5).

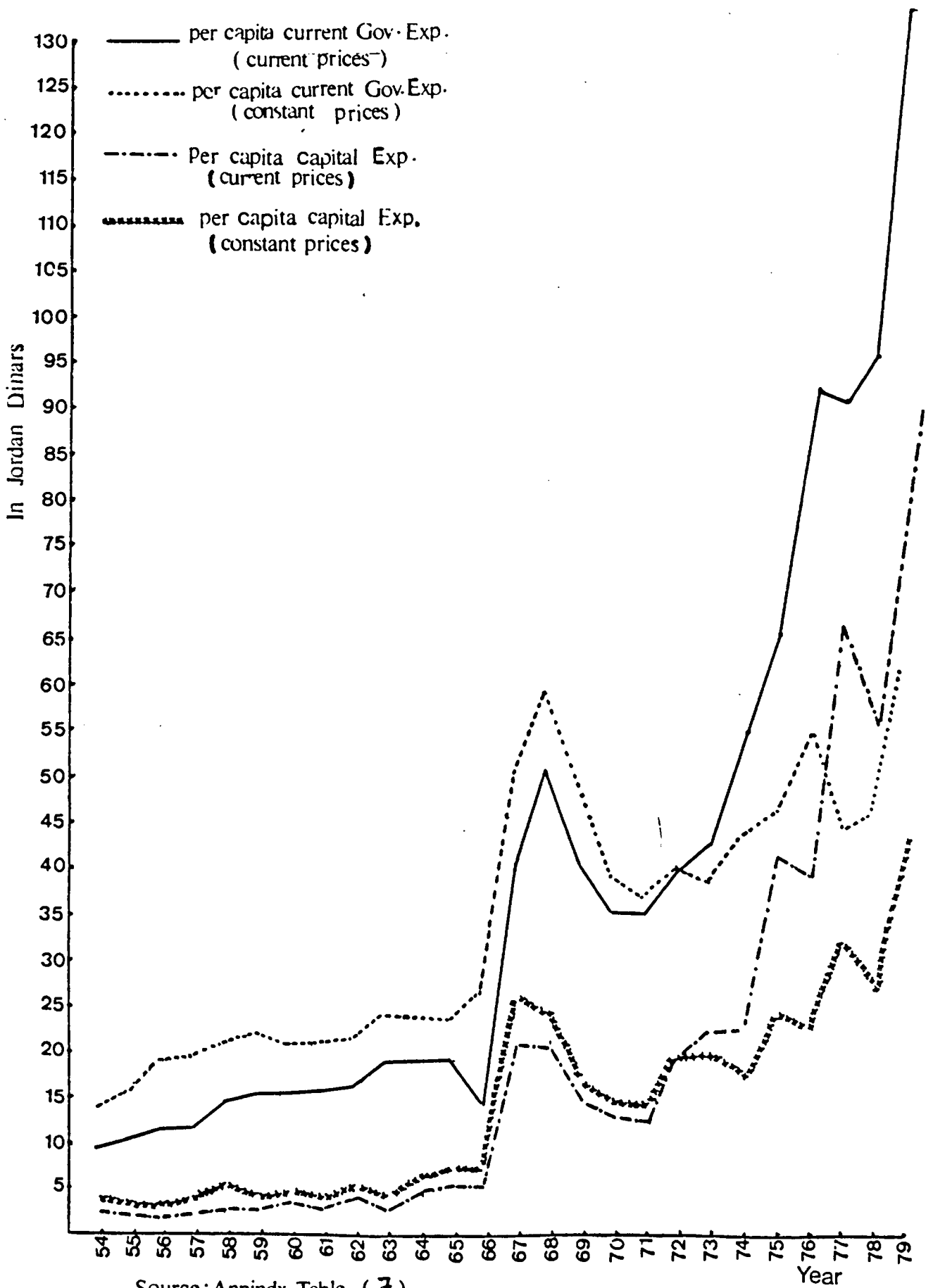
Firstly, the 1967 war and its aftermath particularly the civil strife during the early 1970's called upon the government to face up to the consequences, particularly the vast number of refugees which was estimated at 60,000 homeless people. This situation created extraordinary pressures on the government to provide housing, food and of course was followed by increased spending in areas like education, health and social welfare, as will be discussed shortly.

Secondly, this period in particular was marked by an unprecedented inflationary pressure which eventually led to an increase in government current expenditures to maintain the real level of its expenditures. This is clear when per capita current expenditures in current and constant prices are considered, figure(3.5), in which obviously a vast gap appeared as of 1972 between expenditures in current prices and real terms. The inflationary pressures in turn led to increased demands for higher salaries by government employees. In 1974, for example, basic salaries of government employees were increased by about JD 5-10 per month and in the following year by 10 per cent across the board, with even higher raises for certain professional grades: the cost of living adjustments ranged from 5-20 per cent of basic salary in 1974 and somewhat less in 1975; however, these adjustments did not compensate fully for the inflationary trend[8].

Thirdly, this considerable increase may also be explained by the increase in government subsidies in the same period. Before 1974, almost all government current expenditures were mainly spent on goods and services with a very minor percentage on transfers and subsidies which could hardly be worth mentioning. However, the sharp rise in world prices, particularly during 1974-1975 onwards, created a new situation in which the government started subsidizing certain food items

8 International Monetary Fund, Jordan - Recent Economic Developments Doc. SM/78/34. February 6, 1978. p.21.

Fig.(3.5) Per Capita Current & Capital Exp.
(crrent & constat 1972 prices)



Source: Appindx Table (7).

particularly wheat, meat and sugar, and implicitly petroleum products by holding their prices down. Unfortunately, published data as to the exact amount of government subsidies is not available, however, taking into account the fact that government transfers have always been minimal, a rough estimate was attempted by deducting government consumption expenditures on goods and services from that of current expenditures.

Table (3.6)

Government current expenditures on goods and services and subsidies, 1974-1979. (in million of JD's)

	1974	1975	1976	1977	1978	1979
Current Expenditures	103.6	125.7	185.9	195.6	211.1	291.5
Exp. on goods & services	97.7	110.1	130.3	156.6	180.7	215.0
Subsidies	5.9	15.6	55.6	39.0	30.4	76.5

Source : (i) Appendix Table (6)

(ii) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No.3, March 1980.

Clearly, government subsidies as measured above have increased markedly during this period both in absolute and relative terms. While they accounted for only 5.7 per cent of current expenditures in 1974, their share increased considerably to 26 per cent in 1979, though fluctuated during the same period either because of a fluctuating demand or that of international prices. Such subsidies were politically motivated because evidently they were for politically sensitive products which affects the mass of the population particularly the low and middle classes. However, by the end of the period these subsidies were reduced significantly, partly due to a fall in world prices and partly through government measures introduced recently aimed at increasing gradually domestic prices.

To recapitulate, the level of current expenditures particularly during the post-war period was mainly determined by socio-political factors. Both population changes and the civil-strife during 1969-70 played their part. Also, the inflationary pressures and their consequences were a major determinant in the allocation of government expenditure to current and capital categories.

3.2.2 Capital Expenditures

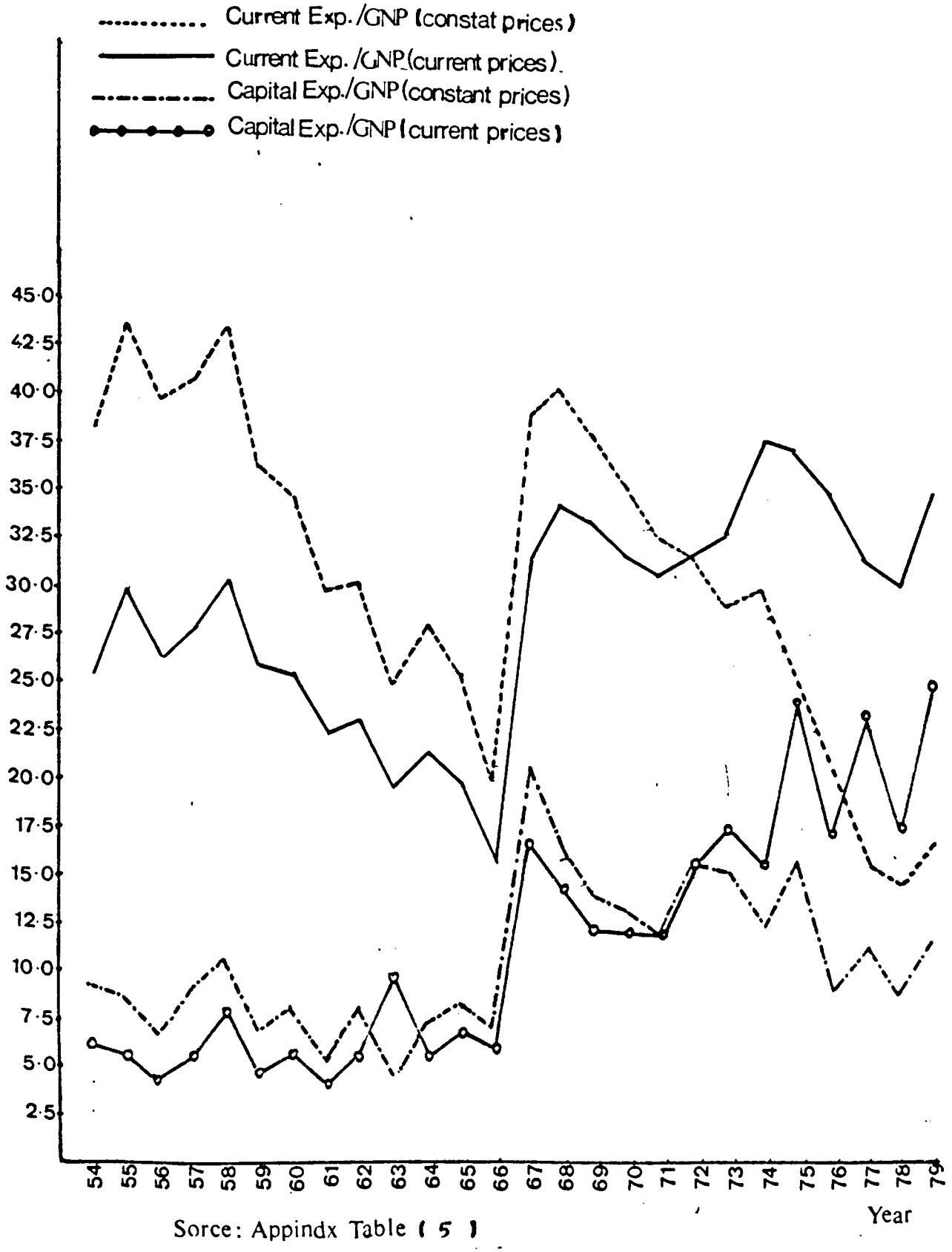
By virtue of the trade-off between current and capital expenditures, the pattern of growth of the former is bound to be reflected in that of the latter. However, unlike current expenditures, capital expenditures showed an irregular pattern of growth throughout the period under examination.

During the period 1954-66, capital expenditure in (current prices) absolute terms showed a modest rise from only JD 3.2 million in 1954 to about JD 11.2 million in 1966 with an average annual rate of growth of 13.6 per cent. However, during the after war period, namely during 1967-79, they increased considerably with an average annual rate of growth of 31.3 per cent as well as increasing their share in aggregate government expenditures to 41.2 per cent in 1979. Table 3.5.

When the ratio of capital expenditure to G.N.P. is taken into account on a per capita basis to account for population growth, one could find that the ratio's pattern of growth is quite irregular, ranging from as low as 3.8 per in 1961 to a high of about 24 per cent in 1979 as is demonstrated in Figure3·6 below. Moreover, when the data is expressed in real terms the pattern of growth remains the same as that of the money terms except for the period 1972-79 in which inflationary pressures are clearly affecting capital expenditures.

This irregularity in capital expenditures appears to be in contrast with the literature on economic development which suggests that in the

Fig. (3·6) Ratio of Current & Capital Exp. (current &constant prices) to GNP. 1954 – 1979.
(1972 = 100)



Sorce: Appindx Table (5)

early stages of economic development the facilities for private capital formation are limited as is the entreprenaural skills. The lack of infrastructural base calls for more capital expenditures by the public sectors since for many reasons, discussed earlier in chapter two, the private sector shy away from investing in such projects. However, Musgrave & Musgrave contended that, as these basic facilities are built up and capital markets are developed, the path is cleared for capital formation of the manufacturing type to go into place and for industrial development in the private sector to occur[9]. This suggests that in a later stage of economic development the capital expenditure mix between private and public sector changes and public expenditures tend to decline. However, this does not generally explain the irregularity in capital expenditures, Musgrave & Musgrave themselves cast doubts on why this happens, in their words, "On balance, it is again difficult to forecast what the trend should be, and chances are that periods of rising and of declining shares may alternate"[10].

Others have tried to explain the irregularity in capital expenditure by resorting to the business cycle, in the sense that in periods of high unemployment growing pressure for capital spending arises. When such spending occurs it tends to reduce the volume of investment spending required later[11]. This might be the case in a developed economy, however, by contrast we have argued (chapter two, p.5) that the nature of unemployment in developing countries is different from that of a developed economy. Therefore, the well-known phenomenon of "bunched investment" on which Peacock & Wiseman based their argument may not be applicable in the case of a developing economy.

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9 R.A. Musgrave and P.B. Musgrave, Public Finance in Theory and Practice, 2nd ed. (Tokyo : McGraw-Hill kogakusha Ltd, 1976), p.191.

10 Ibid, p.141

11 A.T. Peacock and J. Wiseman, op. cit., p.77.

Nurkse on the other hand, had linked the growth of capital expenditures to the population growth and particularly to maintaining the supply of capital per head of the labour force[13].

However, such theoretical explanations seems to hinge on the long-term process and fails to provide a plausible explanation to the short-term period let alone the year-by year fluctuations.

As has been explained, the variation in the public spending on the aggregate level are determined to a large extent by the flow of foreign resources. This in fact should be more so in the case of capital expenditures, particularly when the foreign loans and economic and technical assistance are taken into consideration. This is because, at least, these categories are meant to be for capital expenditures. This high association between the flow of foreign aid and capital expenditures was first experienced in 1964 when the first Five Year Development plan has to be abandoned for the fact that the plan's projection of the flow of foreign resources proved unrealistic shortly after the start of its implementation (see chapter one, p.17).

Moreover, since the government's allocation of total revenue runs from current to capital expenditure, it follows then that in times of a decline in foreign receipts the first thing to be affected is capital expenditures. The marked increase in governments' subsidies during the period 1974-79 may very well have had its effects on the fluctuations in capital spending. The circumstances arose during the 1970's i.e. inflationary pressures, increased salaries of public sector employees, overall increase in current expenditures, as well as the rising government

12 Nurske distinguishes in this respect between two kinds of investments, namely extensive and intensive investment. While intensive investment means an increase in capital per head and hence in productivity, extensive investment in the course of population growth serves merely to maintain the supply of capital per head of the labour force. See Ragner Nurkse, Problems of Capital Formation in Underdeveloped Countries, (New York : Oxford U. Press, 1970) p.48.

subsidies were collectively affecting capital spending.

Having discussed the growth and determinants of government expenditures by economic use, our attention will now be turned to analyse the data on a functional basis which eventually reflect, among other things, the government's commitment to development.

3.3 Functional Distribution of Government Expenditures

The classification of government expenditures by function, apart from illuminating further the government policy in terms of its priority commitment among the various functions, is necessary in order to provide further understanding of the effects of the resource allocation among these functions on the overall government expenditures. In this section, therefore, government expenditures are classified in the following categories :

(1) Economic Services : This covers public expenditures in the main sectors of the economy such as, Agriculture, Industry and Commerce, Transport and Aviation, National Planning Council and other infrastructural expenditure.

(2) Defence expenditure : This item covers only the Ministry of Defence.

(3) Social Services : This category covers expenditures in Education, Health, Ministry of Reconstruction and Development (responsible for the welfare of the refugees), and other social affairs.

(4) General Public Services : This covers Public Administration, Security and Internal Affairs and those of the Ministry of International Affairs and Culture and Information.

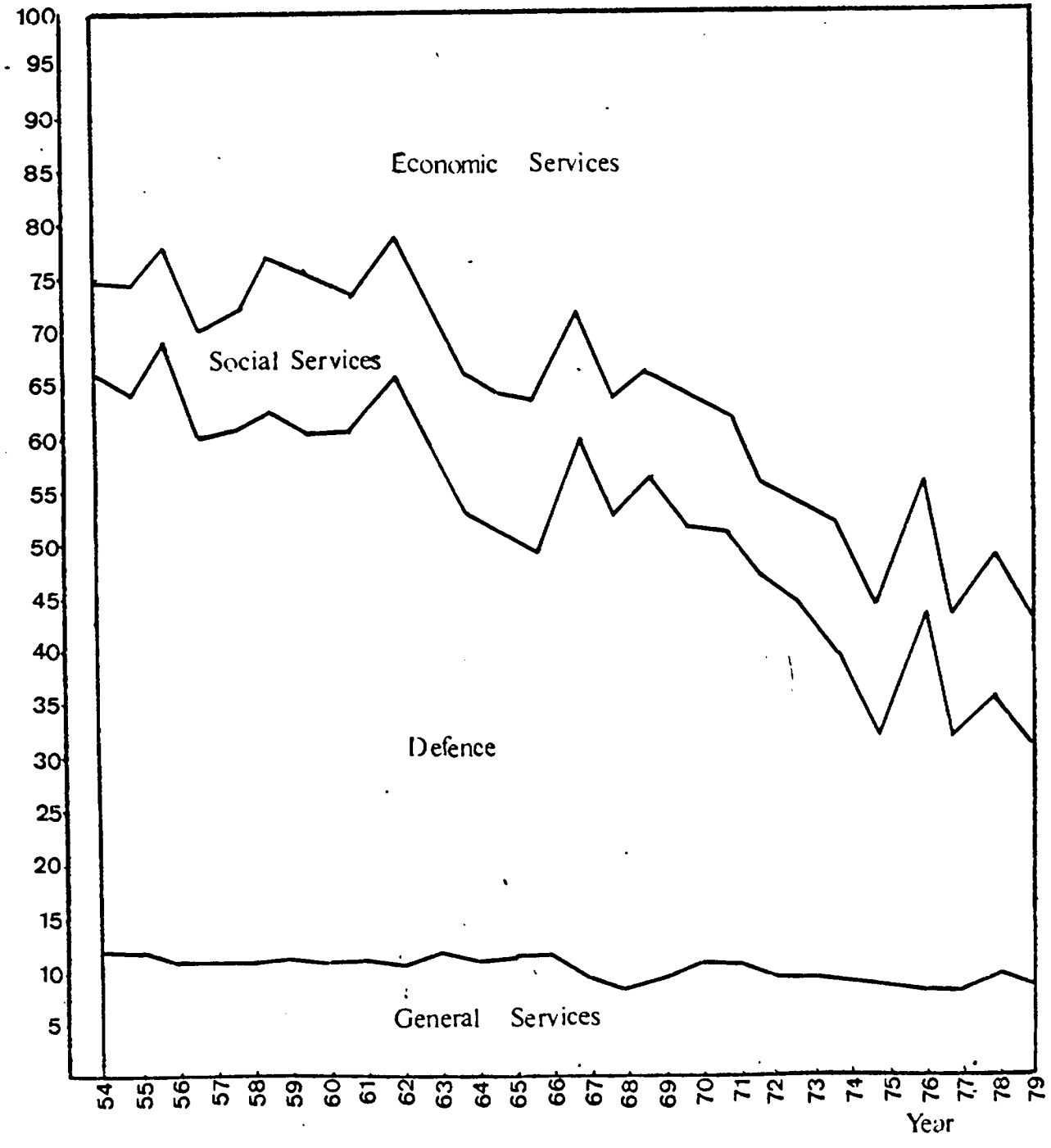
3.3.1 Economic Services

As was alluded to earlier, economic services which is composed mainly of capital expenditures gains more importance during the socio-

political stability. This is to an extent reflected in figure (3.7) which shows that during the period under consideration, economic services fluctuated considerably, but with an ever increasing trend. However, while their increase was modest during the period 1954-1972, nevertheless they eventually became the most important category of all among other components of public spending. While they increase in absolute terms from only JD 4.1 million in 1954 to JD 31.3 million in 1971, yet reached a staggering figure of JD 284.6 million by 1979. Moreover, this represents an impressive percentage of total expenditures of 57.4 per cent. in 1979 while it was only 25.1 per cent in 1954 (Table 10 appendix). Again this is not what one could expect according to what the economic literature tells us in such circumstances in developing countries. Presumably, at least in the early stages of economic development, economic services, particularly infrastructural investments, should take priority. However, in the case of Jordan during the early stages of development, priority was given to defence expenditures as will shortly be discussed, owing to the special circumstances in which Jordan was.

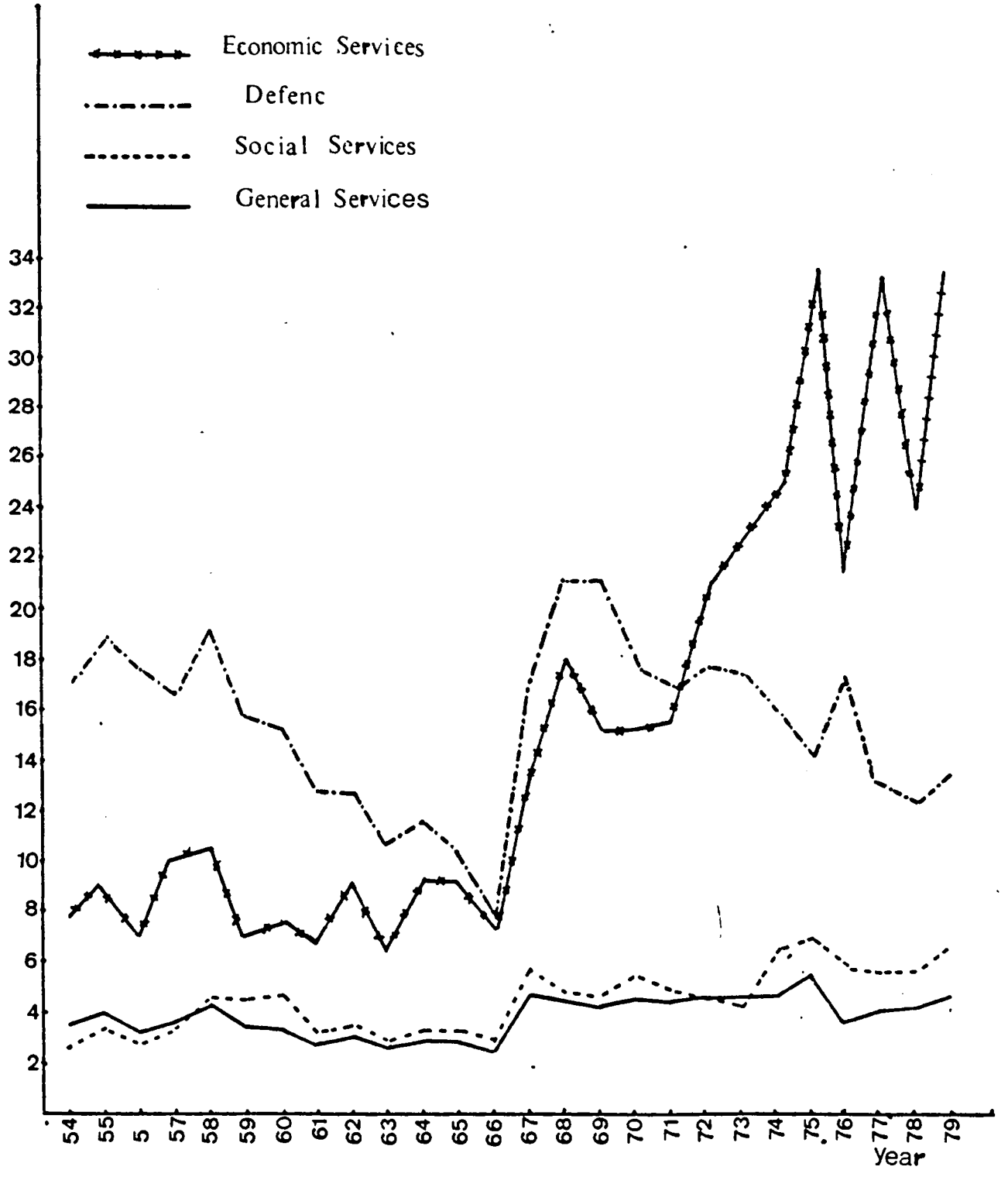
However, due to the fact that most of the economic services are financed from the development budget or in the form of capital expenditure, their fluctuations relative to total expenditure are again constrained by the availability of revenues particularly foreign aid and loans. The increasing trend during the period 1972-79 is mainly due to the launching of the Three Year Development Plan 1973-75 followed by the Five Year Development Plan 1976-80. Clearly, top priority during this period was given to capital expenditures. This is obvious if one takes into account the economic services relative to G.N.P. As Figure 3.8 demonstrates, economic services as a percentage of G.N.P. fluctuated considerably during the period 1954-1966 and remained around

Fig.(3-7) Percentage Distrbution of Total Exp.
By Function.. at Current Prices.
1954 – 1979



Sorce: Appindx Table (8).

Fig.(3-8) Government Exp. as a % of GNP at Current Priees, 1945 – 1979



Source : Appindx Table (9)

10 per cent of G.N.P. However, dropping relatively during 1967-72, they gained momentum after 1972 to reach around 31 per cent of G.N.P. during the period 1977-79. (see also Table 11 appendix). The rising share of the economic services during this period was mainly due to the relaxation of the revenue constraint, the rising level of foreign revenues and decreasing expenditures on defence.

3.3.2 Defence Expenditure

As was mentioned before, obviously defence expenditure is considered the most important category in government expenditures. As is depicted in figure 3.8, up to 1971 defence expenditure, in absolute terms, formed the most important single item in government spending. Although it formed about 45.4 per cent of total government spending in 1954, however, it dropped to about 37 per cent in 1966. After the 1967 understandably defence spending increased and again reached 50 per cent of government spending on the aggregate level. By 1972, and the starting period for development effort defence expenditure showed a declining trend to reach its lowest level ever of 23 per cent of total expenditure by 1979 (Figure 3.7 and Table 8 Appendix).

When defence spending relative to G.NP. is considered, although it dropped relatively from 21 per cent in 1968 to 13.4 per cent in 1979, however, even the latter figure is still considered considerably high. In normal times, in other countries, defence expenditure does not exceed 5 per cent of G.N.P. It could be argued though that owing to the political and military upheavals in the area this level of defence spending is justified. However, data for the period 1965-1971 which contains normal as well as abnormal periods in terms of military unrest in the Middle East, shows that apart from Israel, Jordan spent more than any of the other six countries in the area. For example, 1966 Jordan's defence expenditure relative to G.NP. was 21.1 per cent while

that of Egypt 11.1 per cent, Iran 3.6 per cent, Israel 12.2 per cent, Iraq 10.5 per cent, Saudi Arabia 12.1 per cent and Syria 11.1 per cent Table 3. 7. By 1971 while Israel has increased its defence expenditures share in G.N.P. to about 24 per cent, still Jordan was ranked third after Egypt and Israel.

Moreover, clearly there is a strong trade-off between defence spending and expenditure on economic services. As is obvious in fig. 3.8, a strong association between the two items appear. Whenever defence expenditures decreased this eventually released resourc es for economic services.

It should be noted however, that these figures are only current expenditures. Capital defence expenditures are not reflected here, obviously if this is added defence spending relative to G.N.P. would most certainly be higher. Even though when defence spending relative to current and total expenditures are considered it still forms a very high ratio. As table 3..8 reveals, defence expenditure as a ratio to current expenditures formed over 55 per cent during 1970-73, however, it dropped to 39.4 per cent by 1979. While relative to total expenditure dropped from 41 per cent in 1970 to 23.2 per cent in 1979. Obviously, defence spending has a great impact on the levels of current and total expenditure and therefore its fluctuations must be reflected in similar fluctuations in the latter magnitudes.

It is therefore very important for Jordan that if military tensions in the area could be eased up, its military commitment would decline releasing more funds for economic development.

3.3.3 Social Services

As has been explained, social services are bound to be affected by the permanent effects such as the population growth and the degree of urbanization. Therefore, one would expect spending on education and

Table 3.7. Defence Expenditure as Percentage of G.N.P. For Some Countries in the Middle East. (Per cent)

	1965	1966	1967	1968	1969	1970	1971
Egypt	8.6	11.1	12.7	12.5	13.0	19.6	21.7
Iran	4.4	3.6	5.5	5.6	6.0	7.1	8.5
Israel	11.7	12.2	13.8	15.4	24.1	26.5	23.9
Iraq	10.2	10.5	10.3	9.1	9.6	9.4	6.5
Jordan	16.9	21.1	21.0	17.6	16.9	17.7	17.3
Saudi Arabia	8.6	12.1	11.9	8.9	8.8	9.4	8.9
Syria	8.4	11.1	11.9	12.1	11.6	12.1	9.8

Source : (i) International Institute for Strategic Studies, The Military Balance, (London: 1973), pp. 71-72.

(ii) Appendix Table (8).

Table 3.8. Defence Expenditures as per cent of Current and Total Expenditures in Jordan (selected years) (Per cent)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
(1) As per cent of Current Exp.	56.0	55.6	55.8	33.4	42.9	38.4	50.2	42.2	41.9	39.4
(2) As per cent of Total Exp.	41.0	40.6	37.1	35.2	30.3	23.6	35.6	24.4	26.6	23.2

Source : Tables (8) and (6)

health to be affected positively by population growth. It is also to be expected in this respect that social services would grow up as fast as that of national income.

Although expenditures on social services had increased over time in absolute terms, yet their share in total government expenditure has not shown a considerable change. Moreover, their growth rates have not been steady but the fluctuations were narrow. The examination of the data reveals that their growth rates were sluggish during the period 1954-1966, however there has been a relative change particularly during the period 1970-1979. While government spending on social services had increased from less than JD 1.5 million in 1954 to JD 5.6 million in 1966, it reached an unprecedented figure of JD 56.39 million in 1979.

However, as has been argued before, the government must feel obliged in periods of high inflationary pressures to increase spending on social services in monetary terms simply to keep their real value stable. Therefore, it is not surprising to find that particularly during the period 1972-1979, during which considerable inflationary pressures exerted their influences on government spending in general, to be more so in the case of social services. While expenditure on social services in current prices during the said period grew with an average annual rate of 26 per cent, yet in real terms they showed only a 14.2 per cent annual average rate of growth.

When these expenditures are taken as a percentage of G.N.P. they fluctuated narrowly between 2.8-6.6 per cent during the whole period under consideration, as indicated in figure 3.9. Coupled with their low share in total government expenditures, this would suggest that this category was relatively given low priority on the part of the government with top priority given to defence expenditure, until this was changed in favour of more spending on economic services as was discussed earlier.

When the composition of social services is taken into account, clearly the education expenditure takes the largest share, accounting for more than 65 per cent. This was largely due to the population growth pattern as well as the emigration from the West to the East Bank after 1967. Also, the increased urbanization, as discussed earlier, clearly exerted more pressures on the government to provide more educational facilities.

3.3.4 General Public Services

There is no clear theoretical explanation to explain the behaviour of the expenditures on general public services during economic development. However, one would expect an increased spending on internal security with the expanding urban centres.

The share of this category in total expenditures as is demonstrated in figure 3.8, has not changed over time although spending has increased in absolute terms. While expenditures in absolute terms have risen from about JD 2.0 million in 1954 to JD 40.0 million in 1979 their share in total government expenditures remained almost unchanged standing at 4.0 per cent. Likewise, their share in GNP had changed slightly after 1967 particularly during the period 1972-79 which again could be attributed to the rising prices more than anything else, as is depicted in figure 3.9.

As far as the composition of this category is concerned, understandably expenditures on security and internal affairs formed the largest share standing around 70 per cent of total general public expenditures. However, in spite of the fact that it continued rising considerably in absolute terms after 1967, nevertheless its share in total general public services fluctuated but with a declining tendancy. (Table 3.9).

Table 3. 9. Components of General Public Services
(Selected years)

(in millions of JD's)

	1954-66	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Security and Internal Affairs	2.481	4.383	4.239	4.691	5.140	5.106	5.822	6.384	8.071	10.034	11.473	14.419	16.750	23.514
	(70.1)	(65.3)	(58.5)	(57.5)	(60.6)	(59.0)	(57.6)	(57.1)	(61.1)	(56.6)	(56.9)	(56.6)	(55.9)	(59.0)
Other	1.063	2.328	3.002	3.467	3.339	3.534	4.277	4.784	5.129	7.663	8.660	11.017	13.176	16.251
	(29.2	(34.7)	(41.5)	(42.5)	(39.4)	(41.0)	(42.4)	(42.9)	(38.9)	(43.4)	(43.1)	(43.4)	(44.1)	(41.0)
Total	3.544	6.711	7.241	8.158	8.479	8.640	10.099	11.168	13.200	17.717	20.133	25.436	29.926	39.645
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

Source : Table (10)

3.4 Concluding remarks

The analysis carried out in this chapter on the pattern of growth of government expenditure revealed that the period under examination, namely, 1954-1979 could practically be divided into two sub-periods as far as the pattern of growth of government spending is concerned. These are the pre-war (1954-1966) period and the post-war (1967-1979) period, each of which was characterized by special circumstances thereby being reflected on the pattern of growth of government spending. More specifically, in the pre-war period government expenditure showed their normal pattern of growth rising steadily but slowly, however, with a reasonable rate of growth higher than that of national income. Moreover, the permanent effects, particularly prices and population growth, seem to have no apparent effect on government spending. Actually, this is so because this period was characterized by reasonable price stability not exceeding 2-3 per cent, which naturally allowed remarkable real growth rates for all economic indicators.

On the other hand, the post-war period was quite different due basically to an ever changing situation. The 1967 war clearly had its effects on government spending, both directly and indirectly. Understandably, the war resulted in an increased government spending on defence and war related expenditures which gave rise to an increased aggregate government expenditure particularly on the current account. Furthermore, the sudden increase in population due to emigration from the West Bank to the East Bank of Jordan clearly placed heavy pressures on the government to step up its relief expenditure, health, education and other social services. More importantly, this period was characterised by heavy inflationary pressures especially after 1972. This has been, may be, one of the most important effects during the said period to affect the levels and pattern of growth of government spending and clearly obvious

when the data is reflected in real terms.

Other empirical tests have shown that the size of the foreign trade sector as measured by the import ratio has a significant effect on government spending. Also, the past levels of government expenditure were shown to exert their effects on the current year levels of government expenditure although there seemed to be little theoretical explanation, if any, to why this should be so.

Most importantly is the fact that the heavy dependence by Jordan on foreign aid has its direct impact on the levels of government spending. This is obvious particularly when the capital expenditures, which are mostly financed from this source, are taken into consideration. Therefore, the revenue constraint exerted by the availability of foreign resources must be considered, among other things, the most important factor determining the level as well as the behaviour of government expenditures.

These factors were also reflected when government spending was disaggregated into current and capital expenditure. However, while the period 1954-1966 was characterized by the fact that more priority was being given to current expenditures, the post-war period showed different emphasis being placed on development or capital expenditures. More importantly, the inflationary pressures alluded to above seem to have created new phenomena in the sense that, for the first time, since 1972 government subsidies for some politically sensitive products showed a considerable increase.

Moreover, although the share of defence spending relative to either total government expenditure or G.N.P. have been declining over time, it nevertheless is still considered high by most standards. In normal times defence spending should not be more than 5 per cent of G.N.P. However, in the case of Jordan the military as well as the geo-political situation in which Jordan operates placed heavy pressures on the

authorities for an increased military commitment. It is therefore not surprising to find that this factor has a great effect on the functional distribution of government spending. By virtue of the trade-off between expenditures on defence and economic services, it was clear that whenever government expenditures on the former are increased the latter was the first thing to be affected. It follows then that the development effort of the country is hampered by the level of defence spending.

CHAPTER FOUR

ANALYSIS OF DIRECT TAXES IN JORDAN

Under the present Jordanian tax law, there exists two forms of direct taxes, namely, taxes on income and profits, and property taxes. The former includes personal income taxes and business profits tax or mainly company tax, while the latter includes urban land and building tax and rural (irrigated land) land and building tax. Although company taxation comes under the income tax law, it seems more appropriate to consider it under separate heading due mainly to the nature of the tax base as well as the rates and other concessions applicable.

Therefore, in section one the structure of direct taxes is presented. Section two presents an evaluation of the effects of direct taxation in line with the objectives of the tax system. This is followed in section three by a statistical testing of the responsiveness of direct taxes, i.e. a measurement of the elasticity of direct taxes. Section four considers arguments concerning the applicability of selected other direct taxes in Jordan.

4.1 The Structure of Direct Taxes

4.1.1 Personal Income Tax

Income tax law was first introduced to Jordan (East Bank) in a primitive form in the 1933 law, which imposed income tax on wages and salaries. This law was based on the Indian income tax law which was based on British income tax law at the time. In 1945, law No. 26 was introduced in which the base of the tax was widened to include any income or profit from any work, craft, business, profession or vocation in the East Bank of Jordan.

On the other hand, income tax law was first introduced to West

Bank in 1941 which was then repealed by law No. 13 of 1947. However, after the unification of the East and West Bank, income tax law No. 50 of 1951 was introduced to replace all income tax legislation in the two Banks before. This law was in force for four years until it was repealed by law No. 12 of 1954, which mainly excluded income of Jordanians from overseas from tax as well as reducing the progressiveness of the tax rates. However, in 1964 the first "modern" income tax law was introduced, known as Income Tax Law No. 25 of 1964 which is still in force. Our analysis is therefore confined to the 1964 law.

Before proceeding any further, let us define the income concept we are talking about. Economists define income as the amount an individual can spend during a particular period of time and still have the same net assets (in money terms) at the end of the period as at the beginning. To put it differently, one can say that income is the amount of individual's consumption outlay plus the increase (or minus the decrease) in his net worth during a particular period of time[1].

Jordan's income tax law applies the global income concept, that is, all income from different sources is pooled in a single total for each taxpayer and subject to a single progressive rate. In addition, a surcharge of 10 per cent of the income tax, known as the Social Services tax, is levied and collected subsequently with the income tax by the income tax department.

The 1964 law covers all usual sources of income, however, article 5(1) states that:

"Subject to the provisions of this law, income tax shall be payable at the rate or rates specified hereinafter, on the income derived

1. See J.R. Hicks, Value and Capital : An Inquiry into some Fundamental Principals of Economic Theory (Oxford University Press, 1939), pp. 171-181; Henry C. Simon, Personal Income Taxation : The Definition of Income as a Problem of Fiscal Policy (University of Chicago Press, 1938), Chap. 2; and Richard A. Musgrave, The Theory of Public Finance : A study in Public Economy (McGraw-Hill Co., 1959), pp. 161-73

or earned by any person in the Kingdom"[2].

This means that Jordanian residents are not taxed on income arising outside the country. This limitation on the income tax base runs counter to the ability-to-pay principle. This results in fact in that Jordanians working abroad, particularly those in the neighbouring Oil-producing countries, completely escape Jordanian tax on their incomes.

As for investment income, capital gains, dividends and income from agricultural income are not taxed (Article 8(1,m) r), 2). In spite of the fact that the law subjects interests and discounts to income tax article (8.1.C), recently interests received on loan certificates issued by the public shareholding companies were exempted[3].

The tax base is also modified by the existance of a number of family and other allowances, the nature and development of which are given below.

Table (4.1)

Changes in Personal, Family, Educational and Dependant Allowances in JD's

Allowances	Up to 1975	As of March, 1975	As of 1976
Resident Allowance	100	200	200
Family Allowance			
Wife	100	150	150
1st Child	25	50	50
2nd Child	20	50	50
3rd Child	15	50	50
4th Child	10	50	50
Employment Allowance	15% Subject to max. of JD 200	20% Sub. to max. of JD 300	50% Public Employees 25% Private Employees
Educational Allowance	200	400	400
Dependant Allowance	50	50-100	50-100

Source : Income Tax Law No. 25 of 1964, As amended.

2. Government of Jordan, Income Tax Law No. 25 of 1964. Official Gazette, No. 1800 of 17.10.64 and amendments..

3. (see next page)

In general, the Jordanian tax system starts from the premis that a wife is dependent on her husband. Thus, according to article 5, para. 6, the husband is responsible for submitting a return on their joint income and is liable for their joint tax. Any income of his wife's is aggregated with his, and in recognition of these obligations he is given an allowance of JD 100, which was increased since 1975 to JD 150. In addition to this, the first four children are given an allowance of JD 70 which was further increased to JD 200 as of 1975. Apart from these family allowances, the tax payer is granted a resident allowance of JD 200, Table 4.1 above.

Over and above, the taxpayer is given an employment allowance originally set at 15% of gross employment income subject to a maximum of JD 200. Subsequently, this was increased to 20% subject to a maximum of JD 300 in 1975. However, the most important change that took place concerning the allowances was the extension of the employment allowance to 50% of gross earned income of public sector employees, and 25% for the private sector employees[4].

This change practically exempted all but the highly paid public sector employees. To give an example, let us assume a couple with four children earning, say JD 100 a month. Their tax liability according to whether the man is a public or private sector employee will be as illustrated on next page.

This example shows that a public sector employee will pay JD 12.5 income tax, while a private sector employee will pay JD 30.5 on the same annual income. If we go further and assume that both have a son at university, then each will have a deduction of JD 400.

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3. Government of Jordan, "Provisional Law No. 4 of 1979". Official Gazette, No. 2833, page 28, January 1st, 1979.
4. Government of Jordan, "Provisional Law No. 23, of 1976". Official Gazette, No. 2613, p.571, March 16, 1976.

	Public Sector Employee JD	Private Sector Employee JD
Annual Income	100 x 12 = 1200	100 x 12 = 1200
minus,		
(1) Resident & Family Allowance	350	350
(2) Employment Allowance	(50%) 600	(25%) 300
Total Allowances	950	650
Taxable Income	250	550
Income Tax	250 x 5% = 12.5	400 x 5% = 20
		150 x 7% = 10.5
		30.5

This will result in that, the public sector employee will pay no tax at all, while the private sector employee will pay tax on JD 150 only at the 5% tax rate i.e., his tax liability will be JD 7.5 only.

The argument for discriminating in favour of public sector employees has been that, their standard of living has been declining due to the fact that their salaries have been, more or less, stagnant over the past ten years, whereas those in the private sector witnessed steady increases over the same period more than or equal to the rate of inflation. In addition, the withholding of the tax is much better enforced in the public sector; equal treatment therefore requires some concessions to the public sector employees.

As for the tax rates, article 24 of the law sets out the schedule according to which the tax upon the chargeable income of any person shall be charged. The marginal and effective tax rates are presented in Table 4.2 and Figure 4.1 below.

It is apparent that both the marginal and the effective tax rates rise more steeply in the first seven brackets due to their relatively narrow bands (JD 400) than in the last four ones. While the marginal

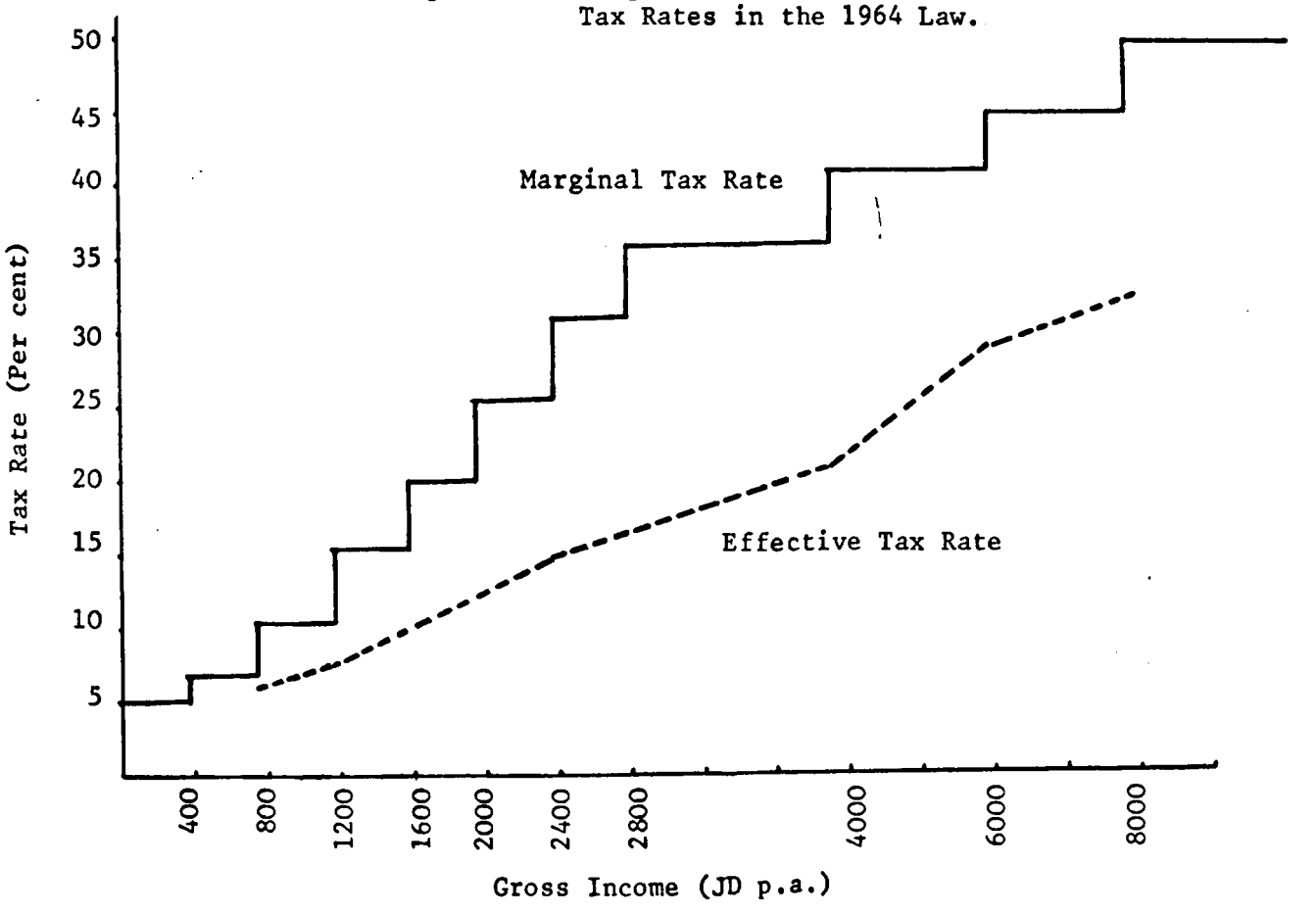
Table 4.2 The Income Tax Rates in the 1964 Law*

Chargeable Income	Tax (at lower band)	Marginal Tax Rate %	Effective Tax Rate % (at lower band)
0 - 400	-	5	-
401 - 800	20	7	5
801 - 1200	48	10	6
1201 - 1600	88	15	7.3
1601 - 2000	148	20	9.3
2001 - 2400	228	25	11.4
2401 - 2800	328	30	13.7
2801 - 4000	448	35	16.0
4001 - 6000	868	40	21.7
6001 - 8000	1668	45	27.8
8001 and over	2568	50	32.1

* plus 10% Social Service Tax

Source : Income Tax Law No. 25, 1964

Fig. (4.1) Marginal and Effective Tax Rates in the 1964 Law.



tax rate for the first seven brackets ranges between 5-30%, the effective tax rate by contrast reaches 13.7% at an income level of JD 2800, however, for the last three brackets the marginal tax rate increases to 50% while the effective tax rate reaches a maximum of 32.1% at income level of JD 8000. Of course, the larger the taxable income the more is the effective tax rate.

A noticeable feature of the income tax rate schedule is that the rate applicable to the top income bracket does not exceed 50 per cent.

Professions and trade are also subject to income tax at the same rates as mentioned in Article 24. The taxable income is defined as net profit and the acceptable operating expenses are determined by the tax law Article 9-13.

4.1.2 Company Taxation

Before embarking on an appraisal of the present system of company taxation, it is necessary to briefly describe the legal status of companies due to the fact that certain provisions of the company tax differs according to the legal status of companies as well as a difference in the tax rates applicable.

Companies are disaggregated into two main groups[5]:

A. Ordinary "controlled" companies: These are personal companies i.e. the personal factor is more important than the financial one. This group is further divided into two kinds according to the legal liability of the partners or shareholders which are limited to 20 or less;

(1) Ordinary "public" company : in which all partners are mutually and collectively responsible to the liabilities against the company and (2) Ordinary 'limited" company : in which there are two kinds of partners, some are collectively and mutually responsible and others

5. Government of Jordan, Companies Law No. 12 of 1964. Official Gazette, No. 1757, May 1964

with limited responsibility as to his participation in the companies capital.

B. Shareholding Companies : These are financial companies, i.e. the financial factor is more important. Again they are further divided into two forms:

(1) Public Shareholding Companies (Ltd) : Shares of which are open to the public, and the shareholders have limited liability in proportion to their shares (Article 39 (2,a).

(2) Private Shareholding Companies : shares of which are not open to the public, with also limited liability in proportion to the shares. Article 39 states that once the number of shareholders exceeded 20 the company must be transferred into a shareholding company.

Although the tax on companies' profits has always been dealt with under income tax, different tax rates have been applied and an assessment of the taxable income has always been based on published accounts and legal books. Taxable income is defined as net profit, i.e. after deducting the legally accepted operating expenses as defined by the law, particularly articles 9-13, the rest is considered as taxable income.

Article 25(1), states that "the tax upon the chargeable income of any company shall be charged at the rate of (450) four hundred and fifty fils on every Dinar of chargeable income, and such tax shall be final, and may not be refunded or set-off under any of the provisions of the law"[6].

In addition, Article 8(1)r), stipulates : "There shall be exempt

6. Originally comapnies were taxed at a flat rate of 25% of chargeable income. This rate was modified first by increasing it to (35%) (Provisional Law No. 29 of 1969, Official Gazette, No. 2195 p.976, Sept. 7, 1979 to be effective as of Jan. 1st 1970.) Further, the rate was increased to (45%) (Provisional Law No. 63, 1976. Official Gazette No. 2613, p.298, Dec. 31, 1976, to be effective as of Jan. 1977.

from tax, income from dividends distributed by a company which paid the tax according to Article 25(1) of this law, ..."[7]

However, a new amendment to the law was introduced in 1979, in which two important changes took place; On the one hand it singled out the shareholding companies to be covered by the flat rate while ordinary companies' profits were left out to be subject to the progressive rate schedule. On the other hand, and perhaps more importantly, it introduced for the first time a differential tax rate structure among the shareholding companies. The law distinguished between three types of companies according to the fields of activity, then subjected each group to a different flat rate as follows[8]:

(a) Commercial banks; Financial companies; Insurance companies; Foreign Exchange Companies (Sarafeen), are subject to a flat rate of 45 per cent.

(b) Public Industrial shareholding companies, are subject to a tax rate of 38.5 per cent, and,

(c) Other public and private shareholding companies, are subject to a tax rate of 40 per cent.

Clearly the law was intended to encourage the public shareholding companies in the industrial sector, as the economic development strategy aimed at changing the economic structure in favour of the industrial sector vis-a-vis the services sector. On the other hand, the legislation discriminated against the first group of companies obviously as a disincentive so as to discourage the creation of new companies. In fact, during 1979 the Central Bank reaffirmed this by halting granting any new licences to potential bank openings while encouraging existing banks to open new branches outside the Amman area[9].

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7. Ibid

8. Provisional Law No. 4 1979. Official Gazette, No.(3833), p. (28) Jan 1st, 1979.

9. Central Bank of Jordan, Annual Report, 1979.

Since the 1964 law was enacted, company taxation in Jordan has been based on the imputation system, i.e. the tax on dividends is paid by the company at the flat rate applicable. The essence of the imputation system is that, once the shareholder received his tax free dividends he is considered to have already paid income tax at the rate applicable to the particular form of company in which he has shares. The law considers this tax paid by the company final and cannot be refunded or set-off against any tax from other sources of income. This is a bias against small shareholders whose income usually does not exceed the first two or three brackets of the progressive tax rate schedule, and has the law allowed the tax to be refunded, he eventually would be refunded. This would be the case, if the law permits the dividend to be grossed up with other sources of income and taxed within the proper bracket, then the tax withheld by the company would be credited to the taxpayer against his tax liability from other sources of income. On the other hand, the shareholder whose income falls in the top bracket would pay more tax if a set-off of the tax withheld is allowed in the law.

Currently, the set-off of the tax withheld by the company is a feature of the British tax system, however, payments of refunds wherever applicable are conditioned by the company's payment of the advanced corporation tax (A.C.T.), which is part of the Corporate tax bill as well as, in fact, a prepayment of income tax at the basic rate on dividends which is deducted at the source and paid to the Revenue when dividends are distributed[10]. It is worth noting in this context that the Jordanian Income Tax Law of 1954 allowed the company tax withheld to be set-off and refunded, following the British tax system on which it was basically modeled, thus benefiting the small shareholders[11].

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10. J.A. Kay and M.A. King, The British Tax System (London : Oxford Univ. Press, 1980) p.183

11. Government of Jordan, The Official Gazette, No. 695 (Amman, 1959) p.13.

Undoubtedly, the purpose of exempting company dividends is to avoid double taxation. Some argue that since the corporation pays tax on its earnings, the stockholders should not be subject to an additional tax on the same earnings when they are distributed to him as dividends[12]. More specifically, Kaldor regards "the profits accruing to a joint-stock company ... as the income of proprietor to be taxed just like any other form of property income"[13]. Therefore. the corporate taxation is just a form of taxation at the source, in other words the corporation is being taxed in place of the individuals who own it. In a system of proportional taxation this rationale could be defended, however in a system of non-proportional taxation such rationale is no longer defensible, due to the different tax rates as well as the size of individual incomes[14].

Others argue that corporations have a legal existence of their own quite apart from that of the stockholders[15]. This distinct-entity doctrine is often used to the advantage of the corporation, as for example, in the case of limited liability. It would be logical to be used against the corporation as well.

Let us now turn to the allowances and concessions given to the companies. Aid to companies to help capital investment may take a variety of forms of tax allowances and other concessions. One form of such concessions is the granting of liberal provisions for loss carry forward in order to reduce the risks of companies entering the market.

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12. Richard Goode, The Corporation Income Tax (New York : John Wiley & Sons, Inc., 1951) p.25.
13. Nicolas Kaldor, An Expenditure Tax (London : George Allen and Unwin, 1955) p.41
14. Vito Tanzi and Joseph Aschheim, "Saving, Investment, and Taxation in Underdeveloped Countries", Kyklos, vol. 18 (1965) pp. 205-225.
15. Ibid. p.205.

The Jordanian income tax law allows a loss to be set-off against the total income from other sources during the same year, article (11,1). However, where the amounts of loss cannot be set-off completely against income from other sources in the same year, the amount of loss which cannot be set-off shall be carried forward and set-off against half the chargeable income in the next six subsequent years.

The legislation's qualification of loss carry forward against half of the taxable income may comprise a disincentive for undertaking capital-intensive projects which involve relatively high start up costs. This might hamper the strategy of economic development which favours such projects in the process of Jordan's industrialization, particularly in the import-substituting industries. Generally, capital intensive industries may be attractive in developing countries even in those experiencing acute shortage of capital. Advantages claimed for such capital intensive orientation could be summarized in the following:[16]

(a) Capital may be a substitute for skilled-labour which is a bottle-neck in developing countries,

(b) The quantity of goods produced by labour using simple methods may be inferior.

(c) The time taken to perform a given amount of work may be less in capital intensive industries, and

(d) The high statutory wage levels and industrial trade union actions, where they exist, may lead to increased costs in labour intensive industries.

Moreover, article 9 of the law permits taxpayers who carry on business to deduct, among other expenditures, the depreciation of the cost of fixed assets, computed at prescribed straight-line rates which

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16. Nizar Jetha, "Company Taxation in East Africa", in Milton Taylor, ed., Taxation for African Economic Development (London : Hutchinson Educational Ltd., 1970) pp. 284-287.

vary by type of asset. These rates range from 1.5% to 6.5 per cent annually for buildings; and from 2% to 25% for machinery and equipment - in manufacturing most machines are depreciated at 7-10%. Any depreciation not claimed by the taxpayer, because of insufficient income in a given year, may be carried forward indefinitely to offset future income (Article 9 (1,2).

It is argued that a more realistic approach would be a change from the present straight-line form to an accelerated form of depreciation allowances. This takes the form of allowing the firm to write-off the cost of the capital investment in a short period. It is assumed that businessmen recognize an advantage in receiving income in the near future as compared with the same amount of income in the most distant future. Basically, accelerated depreciation allowances postpones some tax liabilities into the future. This may reduce the risk and uncertainty as the businessmen usually set a short "pay-off period", usually shorter than the assets' physical or economic life, but at the same time it should be acknowledged that such a measure may prove to be a revenue loser especially in the short run.

4.1.3 Taxes on Property

Property taxation in Jordan is levied on real estate property transfers. An improved property taxation could constitute a major step forward in providing for a more equitable tax burden distribution as well as an important source of revenue. Reviewed below are the urban land and building tax and the Rural land and building tax.

4.1.3.1 Urban Land and Building Tax

The tax was first imposed by the 1925 law, which was then replaced by law No. 60 of 1951, with minor changes. This was further replaced by law No. 42 of 1963 with only changing the rate of the tax on buildings (increased from 8 to 10%) and on lands (decreased from 8 to 5%).

The law was then amended by law No. 9 of 1967, on both of which our discussions is based.

The tax is an annual levy on lands and buildings located within municipal area. The land is assessed on its estimated annual capital value which is revised every five years. Buildings, on the other hand, are assessed on their net annual rental value which is determined by deducting 20% from gross annual rent as an estimate of depreciation. The tax rates are 10 per cent on land; and 24 per cent on the net annual rental value of buildings; of which 3 per cent for education, 9 per cent for the sewage services and a 17 per cent basic rate. The tax is collected by the Central Government, however only 10 per cent of its revenues is credited to the budget accounts and the remainder is credited to the municipalition account and a special account of the Ministry of Education.

Notwithstanding the fact that Jordan has witnessed a construction boom during the 1970's, yet revenues from the tax has been declining over time. For example, the number of building permits issued increased from 2408 in 1975, with an area of 419 thousand m^2 to reach 3000 with an area of (1.095) thousand m^2 in 1979[17], the tax revenues has dropped to JD 85 thousand in 1975 and further to only JD 57 thousand in 1977 (Table 4.4)

Perhaps the reason behind the drastic drop in this tax revenue could be attributed to two main reasons. On the one hand, despite the fact that the law requires revaluation of annual rental value every five years, the last revaluation of actual or imputed rental values took place in 1967. On the other hand, there is a great deal of delinquency

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17. Bassam Saket, et al. "The Economy of Jordan Over the 1970's and 1979 : A Bird's Eye View", (Amman: Royal Scientific Society, June 1980) p.12. See also, Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No. 9 Sept. 1980, Table 33.

encouraged by the low penalties that are in effect 10% of the tax for the first year, rising to 50% after five years. Usually delinquent taxes are not collected until the property is sold, or when a tax clearance certificate is needed for one reason or another. Moreover, there are numerous problems for administration when new assessment is done because an estimated 10% of taxpayers appeal against it[18], which takes a long period of time to be settled.

4.1.3.2 The Rural Land and Building Tax

The urban land and building tax has a counterpart applying to irrigated lands and industrial buildings, i.e. the rural land tax, which was first introduced by law No. 30 of 1955 as amended by law No. 15 of 1963. For land, progressive specific rates are levied according to the agricultural commodity under production or the quality of land, ranging from 1500 fils (JD 1.5) per dunum of lands planted with bananas to 70 fils per dunum of second-class irrigated land. Industrial buildings are taxed at a 5% flat rate of its net annual rent.

However, revenues from this tax are negligible given the fact that the Minister of Finance is granted authority to exempt taxpayers suffering from poor crops or any other financial difficulties.

18. Estimates by an I.M.F. mission to Jordan, May 15, 1977

4.2. The Effects of Direct Taxes

It was only relatively recently that the main objectives of the Jordanian tax policy were spelled out clearly. Such objectives are not different from those to be found in any other tax system. The main objectives were described as the following[19]:

(1) The Redistribution of personal income through the absorption of part of the surplus income of the well-to-do to be spent to the benefit of other groups.

(2) Increasing, to the largest extent possible, the domestic revenues of the country to cover an increasing government expenditure due to the development of projects and services, and

(3) Encouraging private sector investments in industrial and agricultural projects, by ensuring a reasonable rate of return to such investments through granting concessions and special allowances.

In line with these objectives, the evaluation of the effects of direct taxes will be considered. Three effects will be considered in turn, the importance of the revenue aspect of direct taxes; an evaluation of the investment incentives and the redistribution of income effect.

4.2.1 The Revenue Importance of Direct Taxes

As was discussed in Chapter three, government expenditures witnessed a considerable increase particularly during the 1970's, both in current and capital categories which are again summarized in Table (4.3). However, government domestic revenues did not grow as fast as that of government expenditures. In spite of the fact that domestic revenues increased from JD 25.5 million in 1967 to

19. Government of Jordan, Department of General Budget : Public Fiscal Policy of the Government. (Amman : Department of General Budget, 1972) p.6.

Table (4.3) Government's Revenues and Expenditures, 1955-1979

(in millions of JD's)

	Average 1955-1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total Revenues	38.1	70.4	72.0	76.5	68.4	79.0	95.2	103.1	139.2	198.8	191.0	320.7	311.8	439.8
a. Domestic Revenues	16.1	25.5	26.4	32.6	30.1	35.6	42.4	46.1	65.2	82.1	104.9	140.0	163.8	181.9
b. Foreign Revenues	21.2	44.9	45.6	43.9	38.3	43.4	52.8	57.0	74.0	116.7	86.1	180.7	148.0	257.9
Total Expenditures	32.9	68.1	80.5	88.4	80.7	83.1	105.9	119.5	146.6	204.9	262.5	337.8	332.7	495.6
a. Current	26.6	44.6	57.2	65.2	59.0	60.7	70.3	78.6	103.6	125.7	185.9	195.6	211.1	291.5
b. Capital	6.3	23.5	23.3	23.2	21.7	22.4	34.6	40.9	43.0	79.2	76.6	142.2	121.6	204.1
Surplus or Deficit	5.2	2.3	-8.5	-11.9	-12.3	-4.1	-10.7	-16.4	-7.4	-6.1	-71.5	-17.1	-20.9	-55.8

Source : Appendix Tables (4 , 12)

to JD 181.9 million in 1979 (Table 4.3), yet they still made up only 41.4 per cent of total government revenues in 1979, with the rest i.e. 58.6 per cent covered by foreign revenues. It is clearly demonstrated that Jordan's foreign revenues not only cover capital expenditures but also part of its current expenditures. Not in any single year did domestic revenue cover all current expenditure.

Although the deficiency of the tax system in administering direct taxes may have been a short-coming of the fiscal system, yet the political power of the different pressure groups may have been one of the main obstacles to tax administration[20]. Moreover, the availability of foreign resources may as well be considered a reason in the sense that it created a built-in inflexibility in the tax system and led to the relaxation of tax effort on the part of the government.

While tax revenues accounted for 70 per cent of domestic revenues on the average, direct taxes made up only 8 per cent of domestic revenues during the period 1967-1977. However, as of 1974 their share in domestic revenues increased slightly to an average of 10 per cent (Table 4.4). Among direct taxes, income tax provided the bulk of the revenues, while taxes on properties contributed not more than 0.1 per cent of total domestic revenues. An I.M.F. mission estimated payments of land and building tax in Amman which has the largest number of taxpayers of an average JD 10 per tax payer a year and remarked that this is possibly one of the lowest amounts in the world for countries that levy a similar tax[21]. On the other hand, when total government revenues are taken into account the contribution of direct taxes is even

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20. The most evident example of this is the introduction of a capital gains tax in 1973 which was subsequently abolished following an outcry of landowners at whom the tax was originally aimed, to lessen land speculation and to divert such resources to more productive avenues, this will shortly be discussed in some detail.

21. International Monetary Fund mission's report "Fiscal Survey in Jordan" unpublished report, 1977.

Table (4.4) Domestic Revenues by Major Components*, (1955-1979)

(in millions of JD's)

	Average 1955-1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1. Tax Revenues	11.6	18.24 (71.5)	19.26 (72.9)	23.20 (71.1)	21.23 (70.8)	23.14 (65.0)	27.53 (65.1)	34.02 (73.8)	43.04 (66.1)	57.58 (70.1)	86.34 (82.3)	115.34 (82.4)	129.66 (79.1)	144.85 (79.6)
a. Direct Taxes	1.6	2.16 (8.4)	1.99 (7.5)	2.49 (7.6)	2.69 (8.9)	3.12 (8.7)	3.50 (8.4)	4.12 (8.9)	5.89 (9.6)	9.36 (11.4)	9.43 (9.0)	13.30 (9.5)	21.90 (13.4)	25.90 (14.2)
a.1 Income Tax	-	2.06 (8.1)	1.95 (7.4)	2.45 (7.5)	2.67 (8.8)	3.07 (8.6)	3.48 (8.1)	4.07 (8.8)	5.83 (8.9)	9.28 (11.3)	9.34 (8.9)	13.24 (9.4)	19.50 (11.9)	22.00 (12.1)
a.2 Property Tax	-	0.10 (0.3)	0.04 (0.1)	0.04 (0.1)	0.02 (0.1)	0.05 (0.1)	0.12 (0.3)	0.05 (0.1)	0.06 (0.1)	0.08 (0.1)	0.08 (0.1)	0.06 (0.1)	2.40** (0.5)	3.90** (2.1)
b. Indirect Taxes	10.0	16.08 (63.1)	17.27 (65.4)	20.71 (63.4)	18.63 (61.9)	20.02 (56.3)	24.03 (56.6)	29.90 (64.9)	37.15 (57.0)	48.22 (58.7)	76.91 (73.3)	102.04 (72.9)	107.76 (65.8)	118.95 (65.4)
2. Non-Tax Revenues	5.3	7.26 (28.5)	7.11 (26.9)	9.44 (28.9)	8.75 (29.1)	12.45 (35.0)	14.81 (34.9)	12.06 (26.2)	22.17 (34.0)	24.48 (29.9)	18.52 (17.7)	24.51 (17.5)	34.14 (20.8)	37.07 (20.4)
Total Domestic Revenues	16.9	25.50	26.37	32.64	30.07	35.59	42.59	46.08	65.21	82.05	104.86	139.95	163.80	181.90

* Figures in brackets represent percentage of total government domestic revenues

** Includes, Departure Tax and 30% of Stamp Duties

Source : (i) Ministry of Finance : Annual Reports, various Issues.
(ii) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No.7, July 1980

less impressive. For example, in 1955-60 direct taxes contributed about 6.6 per cent to total revenues with an average annual growth rate of 3.5 per cent (Tables 4.5 and 4.6). While they maintained a relatively growing rate of growth over the period up to 1973, i.e. 7.7 and 11.2 per cent in 1961-66 and 1967-73 respectively, their share in total government revenues was stagnant. It was only during the period 1974-1979 when they contributed about 5 per cent of total government revenues.

Furthermore, another indicative measure of the low level of direct taxes contribution is their ratios to G.N.P. For example, while the ratio of tax revenues to G.N.P. in Jordan in a five year period 1972-1976 averaged 14.9 per cent, that of other developing countries averaged 16.3 per cent during the same period (Table 4.7). Similarly the ratio of direct taxes to G.N.P., during the same period, was 2.18 per cent, far less than that of the average of developing countries of 5.15 per cent. While income tax as a percentage of G.N.P. in Jordan was less than 2 per cent, it was around 5 per cent in developing countries. However, even though such comparisons are of some importance in indicating the tax effort in comparison with other developing countries, yet the figures should be taken with caution due mainly to the different definitions and statistical practices followed in developing countries. An example of such differences could be found in the fact that some developing countries include stamp duties in direct taxes others, as is the case in Jordan, consider it under another heading, i.e. non-tax revenues which may partially explain the increased relative importance of this item in Jordan as opposed to other developing countries.

"However, the above analysis reveals beyond doubt that the contribution of direct taxes to total government revenues is far less

Table (4.5) Relative Importance of Main Components of Government Revenues, 1955-1979 (per cent)

Source	1955-1960	1961-1966	1967-1973	1974-1979
A. Domestic Revenues	39.2	47.8	41.9	46.7
1 - Indirect Taxes	20.9	30.1	25.8	30.7
2 - Direct Taxes	3.5	4.4	3.5	5.1
3 - Non-Tax Revenues	14.8	13.3	12.6	10.6
B. Foreign Revenues	60.7	52.1	58.1	53.3
Total Government Revenues	100.0	100.0	100.0	100.0

Source : Appendix Table (12)

Table (4.6) Annual Rates of Growth of Government Revenues by Different Components, 1955-1979 (per cent)

Source	1955-1960	1961-1966	1967-1973	1974-1979
A. Domestic Revenues	18.4	13.4	10.9	26.1
1 - Indirect Taxes	9.4	9.8	10.2	27.0
2 - Direct Taxes	6.6	7.7	11.2	37.9
3 - Non-Tax Revenues	11.1	9.6	10.3	27.9
B. Foreign Revenues	-2.8	-1.9	25.9	58.6
Total Government Revenues	6.7	2.5	18.3	30.0

Source : Appendix Table (12).

Table (4.7) Ratio's of Tax Revenues, Direct Taxes and Components To GNP in Jordan and Other Developing Countries*
(Per cent)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1. Tax Revenue as % of GNP in Jordan	12.8	11.6	11.8	11.4	11.6	12.5	14.08	15.4	16.8	15.9	18.5	18.2	21.3
Average Five Years 1972-76								14.9					
Average : Developing Countries 1972-76								16.3					
2. Direct Taxes % of GNP	1.51	1.19	1.26	1.43	1.56	1.60	1.71	2.10	2.73	1.73	2.13	3.56	3.04
Average 1972-76								2.18					
Average Developing Countries 72-76								5.15					
3. Income Tax as % of GNP	1.44	1.17	1.24	1.42	1.53	1.57	1.68	2.08	2.70	1.72	2.12	3.73	2.57
Average 1972-76								1.95					
Average Developing Countries 72-76								4.77					
4. Property Taxes % of GNP	0.07	0.02	0.02	0.01	0.03	0.03	0.03	0.02	0.03	0.01	0.01	0.33	0.47
Average 1972-76								0.02					
Average Developing Countries 1972-76								0.25					

Sources : (i) Ministry of Finance, Annual Reports, various Issues
(ii) CBJ, Monthly Statistical Bulletin, May 1980
(iii) Appendix Table (
(iv) Alan A. Tait, Wilfred L.M. Gratz, and Barry J. Eichengreen, "International Comparison of Taxation for selected Developing Countries, 1972-76", IMF Staff Papers, vol. 26, 1, March 1979, pp.123-156.

*Comprising sixty three Developing Countries.

than is to be expected. In spite of the fact that total domestic revenues increased over time both in absolute and relative importance in total government revenues, the main increases came through indirect taxes followed by the non-tax revenues, while direct taxes remained, more or less, stagnant (Figure 4.2). Although the proportion of direct taxes in the government revenues remained fairly low, it was perhaps a result of a sharp increase in foreign revenues rather than a decrease in the rate of growth of direct taxes.

It is apparent that the business profit tax contributed the bulk of income tax revenues. The share of the business profits in income tax increased from 77.4 per cent in 1972 to 89.3 per cent in 1978 and dropped to 81.0 per cent in 1979, (Table 4.8). This increase was not only an automatic one in the sense that it accompanied the growth of income, but also a result of a growth in the base of the tax. On the one hand, the number of shareholding companies increased considerably from 169 in 1968 to a record high of 792 in 1979 (Table 4.9). On the other hand, business profits tax other than shareholding companies, which includes self-employed, proprietors, traders and ordinary companies increased considerably as well from 14060 in 1968 to 67742 in 1979 of which ordinary companies were 4342.

However, in spite of this obvious increase in the base of the tax, yet the vast majority of traders, professions and the like are still not covered. Their assessment poses a problem to the tax officials as they rarely keep audited books. The large number of traders scattered all over the country is a stumbling block to efficient tax administration. The Tax Department has four major offices[22] over the country which are

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22. These are the main offices supplemented by another 12 small offices in small towns. However, it is perhaps worth noting here that the Amman Office takes over 90% of the work and the rest is covered by other offices.

Fig.(4.2) Gov. Revenues By Major Componants .1955-1979.

(Share %)

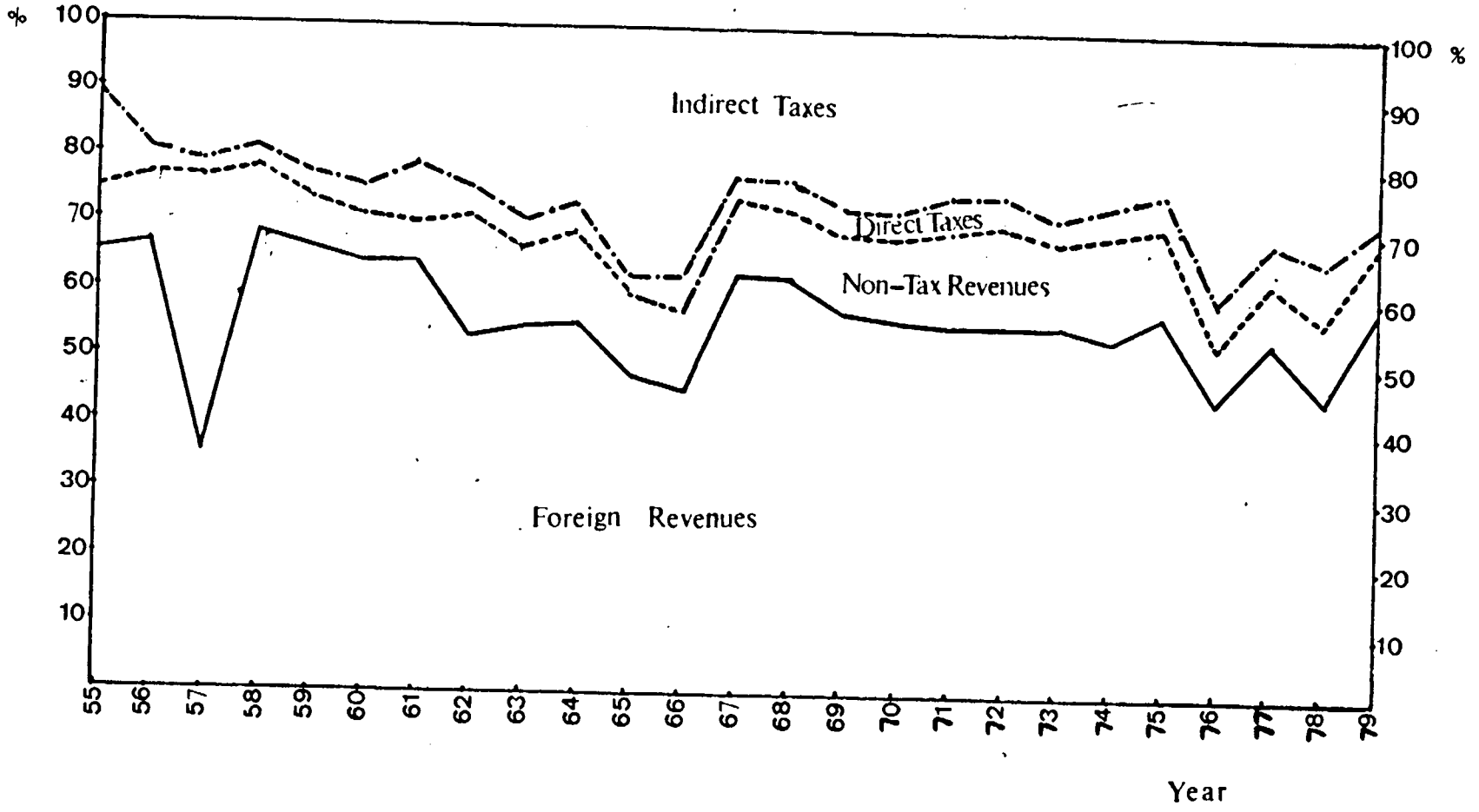

Table (4.8). Income Tax by Major Components, 1972-1979
(in millions of JD's)

Tax Base	1972	1974	1975	1976	1977	1978	1979	1980
(1) Shareholding Companies	1.439 (47.9%)	-	6.200 (67.3%)	7.892 (80.0%)	9.883 (74.1%)	10.764 (57.3%)	12.401 (54.6%)	14.779 (53.4%)
(2) Business Profits (Partnerships, Proprietorships, Ordinary Co's, and self-employed)	0.887 (29.5%)	-	1.630 (17.7%)	0.676 (6.9%)	1.999 (15.0%)	6.016 (32.0%)	6.008 (26.4%)	7.605 (27.5%)
(3) Total (1 + 2)	1.031 (77.4)	3.580 (67.7%)	7.830 (85.0%)	8.568 (86.9%)	11.882 (89.1%)	16.780 (89.3%)	18.409 (81.0%)	22.384 (80.9%)
(4) Public Sector Employees	0.384 (12.8%)	1.162 (22.0%)	0.736 (8.0%)	0.475 (4.8%)	0.285 (2.1%)	0.463 (2.5%)	1.226 (5.4%)	.904 (3.3%)
(5) Private Sector Employees	0.292 (19.7%)	0.542 (10.3%)	0.649 (7.0%)	0.822 (8.3%)	1.161 (8.7%)	1.558 (8.3%)	3.084 (13.6%)	4.372 (15.8%)
Total Income Tax	3.002	5.284	9.215	9.865	13.329	18.801	22.719	27.660 (100.0%)

Source : Income Tax Department, Unpublished Data.

Table (4.9). Numbers of Tax Units by Major Group, 1968-1979

	1968	1971	1972	1973	1974	1975	1976	1979	1980
(1) Shareholding Co's	169	206	225	250	266	288	547	792	940
(2) Ordinary Co's Proprietors, Indiv. etc.	14060	17167	18833	29173	33126	40549	59671	67743*	95325
- (of which Ordinary Co's)	-	-	-	-	1452	1963	2875	4342	4881
(3) Public Sector Employees	30124	36782	40352	41513	49203	57254	63661	93123	95356
(4) Private Sector Employees	10578	12916	14169	14932	17300	21667	31775	90123	67994
Total	54931	67071	73579	85868	99895	119758	155654	251795	259595

Source : Income Tax Department, Unpublished Data.

responsible for the 67742 tax units subject to the business profit tax in 1979. The number is only a small percentage of those actually undertaking trading or business. It is worth noting that the Tax Department reaches only the developed portion such as the retailers and wholesalers, as well as companies.

The above analysis shows clearly that direct taxes have failed to contribute significantly to total government revenues, which indicate that such taxes failed to fulfil the revenue objectives. One could look for several reasons to why this was the case. Firstly, the problems of the income tax administration should be carefully considered. In spite of the actual increase in the base of the tax, i.e. the number of taxpayers increased in 1979 to 251794, the department's staffing has been stagnant during the past five years. The result of this was the accumulation of the cases to be assessed. For example, total number of assessments was 104015 in 1979, a 41% of the total number of taxpayers, however, it should be taken into account that about 93 thousand of the latter represents government employees who contributed about 5 per cent of the total tax collections in 1979, and even less i.e. 3.3 per cent in 1980 while forming about 37 per cent of total taxpayers. Moreover, out of the 44255 assessed cases in the private sector employees section, 17971 or 40.6 per cent cases were found not liable to tax.

The number of objections and appeals are relatively high and amounted to 7279 and 1516 cases respectively in 1979, however, 70% of the latter, i.e. (1516) were settled in the income tax appeal court.

Students of public finance nowadays tend to ignore the importance of tax administration. In Jordan, as may well be the case in most developing countries, no research has been undertaken on the ways and means of improving the tax administration. Although certain changes in the income tax structure as well as instructions, which by now out

of date, are probably the principal way in which income tax compliance and enforcement may be improved in Jordan, there is still much that may and perhaps should be done to improve the administrative machinery. For example, in order to enhance the compliance in the self-employed and other private sector establishments, new instructions are needed particularly concerning the auditing offices to submit a copy of their report on the accounts of those establishments to the tax department. More importantly, new instructions compelling such businesses with certain paid-up capital to furnish legal accounts to the income tax department. Certainly this would not be possible without being made clear in the law, coupled with some covering penalties in cases of fraud or hiding such accounts. It is perhaps ironic to demand a better enforcement and compliance from the income tax department while at the same time it is given no special attention as to its needs for manpower resources, and in fact it is often provided with relatively smaller resources in comparison with other governmental departments. The ratio of the Income Tax Department expenditures to tax collection was 1.738 and 1.384 per cent in 1977 and 1978 respectively[23]. It is generally accepted that a 3 per cent ratio is an acceptable one, therefore it could be argued that there is room for an increased expenditure if the administrative machinery is to be improved. On the other hand, the productivity of the existing personnel could be improved. This could be achieved through on-the-job training programmes, conferences, seminars, etc. Evidently there is a price for this in the short run, but training and improved skills are the best guarantees in the long run. In addition, since an efficient tax administration will only function well where a high degree of taxpayer knowledge of the law is available, it follows then that

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23. Income Tax Department, Unpublished reports, 1977 and 1978.

educational programmes, publicity and publication of taxpayers guides etc., are necessary, particularly in Jordan where it is even difficult to obtain a copy of the income tax law. Of course, this should be complemented, simultaneously by restructuring the income tax law so that it is more amendable to compliance and enforcement. For example a large number of out-dated instructions should be done away with as well as new instructions that are relevant to the current economic and social development should be introduced.

The high possibility of tax evasion should also be considered. It is only to be expected that evidence of income tax evasion, since it is an illegal activity, is difficult to obtain. Ministries of Finance, which, of course, have more evidence of evasion than any other governmental department, are frequently restricted from releasing information by Acts of official secrecy. However, the Director of Income Tax Department in Jordan was very frank in declaring the "... widespread of the tax evasion phenomena and, abstaining from giving enough information or giving false information and wrong accounts"[24]. He gave an example of the evidence on the degree of tax evasion, the number of reopened cases in accordance with article 54 of the Income tax law as well as "the astonishing facts which were discovered through the application of article 37 of the law and the unexpected check on taxpayers"[25]. He concluded from the evidence he was able to put his hands on, that "it could be said that tax evasion is the basic rule ... and giving correct information is the exception", and maintained that there are "closed areas" for the income tax and high incomes that the

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24. Income Tax Department, Unpublished internal report on the 1979 fiscal year, p.18.

25. Ibid. Artical No. 37 of the income tax law gives the Director of the Income Tax Department or any other assessing officer to whom responsibility was officially delegated, to check the records of any taxpayer on the premises as well as withholding such records if necessary. Article 37, para. 1,2,3, page 60.

tax cannot reach"[26].

Clearly this was the only frank account on the degree of tax evasion in Jordan, however, no-one could expect it to be put as bluntly as it was put by the Director of the Income Tax Department. One could read through the above statement on the characteristics of evasion. Primarily, complete tax evasion results from the high degree of incorrect information declared to the tax department. Because of this, evasion is more pronounced on the part of self-employed taxpayers, professions, etc. than it is for salary and wage earners. On the other hand, one could safely argue that the existence of pressure groups, political power centres etc. is a major handicap to the proper implementation of the income tax. This clearly suggests that tax evasion could possibly be a major explanation behind the low performance of income tax as well as property taxation.

Furthermore, one could speculate on other reasons for the low performance of direct taxes, particularly the income tax in so far as the structure of the economy itself is concerned. In the 1950's and 1960's the agricultural sector was the major sector in the economy contributed around 20 per cent of G.D.P. (see Chapter one) however, it was and still is excluded from income taxation. On the other hand, Jordan's dependance on foreign trade particularly imports may have given rise to relatively higher indirect taxes and by contrast lower direct taxation. The emergence of the industrial sector and the investment incentives it was granted in the form of tax holidays, as will shortly be discussed, could be another factor. In addition, the extent to which tax concessions and allowances as described in section one as well as the total exclusion of capital gains from taxation have aggravated the problem, particularly if one acknowledges the fact

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26. Ibid.

that land speculation was the major source of investment during the seventies.

Finally, it should be noted that certain loopholes in the income tax law itself contributed to the above reasons, particularly the powers conferred on the tax assessor in the process of income tax law implementation, see for example article 53 of the law. Moreover, the fact that the law have put a ceiling of 50 per cent on the upper limit of the income tax schedule reveals that the law has given the upper income levels a clear advantage, while in other countries the upper limit of income tax was far more than the 50 per cent level[27].

The above discussion clearly demonstrates that direct taxation in Jordan has failed to fulfil the revenue objective which perhaps was the main objective among others, due to the fact that Jordan depends largely on foreign resources rather than on its domestic revenues, a picture which for a long time has been in the forefront of economic discussion. However, this should not obscure the fact that some progress has been taking place during the past three years. If such progress keeps pace with the developments in the economy, coupled with administrative capacity improvements and modification of the law to accommodate the changing economic structure, then and only then can one look for a better role for direct taxation in Jordan, particularly the income tax system.

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27. The upper limits of the marginal tax rates in several countries were, Syria 70%, Lebanon 42%, Iraq 70%, Egypt 95%, Britain 60%, France 70%, Germany (Federal Republic) 90%, Japan, 85%. See U.N. Taxes and Fiscal Policy in Developing Nations. U.N. Publication Office, 1975 p.204; see also Kay & King, op. cit.

4.2.2 Evaluation of Investment Incentives

Up to 1972, three laws concerning the encouragement of investment were passed with limited effect and applicability[28]. However, with the promulgation of the Three Year Development plan 1973-1975, business enterprises were granted investment incentives on wide-range basis under the Encouragement of Investment Law No. 53 of 1972, which was later modified by law No. 60 of 1973 and provisional law No. 16, of 1977 both of which introduced some changes concerning the implementation of the law provisions. Therefore, due to the fact the very minor investments have taken place up to 1972 under the previous laws, i.e. those which were established to benefit from the incentives, our analysis is concentrated on the evaluation of the effects of the 1972 law alluded to above.

The law has very many generous features including preferential measures, incentives, facilities and guarantees to which Jordanians, Arab and foreign investors alike have access. A project engaged in industry, tourism, housing, or land reclamation is eligible for tax exemptions provided the fulfilment of the following conditions[29]:

(a) It is identified with the goals of general plan of economic development.

(b) Contributes to the increase of national production.

(c) Its gross value added should constitute not less than 20% of its cost.

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28. These are (1) The Law of Encouragement and Direction of Industry No. 27, 1955; (2) Encouragement of Foreign Investment Law No. 28, 1955, and (3) Provisional Law of Investment Encouragement No. 17 1967). All three laws provided mainly tax holidays of (Income Tax and Social Service Tax) for three years, and half-profits for another two years along with exemption of fixed assets of industrial projects from Custom duties and other indirect levies for short periods. All contained similar provisions with minor changes.

29. Ministry of National Economy "Encouragement of Investment Law No. 53 of 1972" In, Investment Conditions and Opportunities in Jordan. (Amman, Nov. 1972).

(d) Contribute to the improvement of the trade balance or the balance of payments.

(e) Be approved by the Government authority generally the Council of Ministers.

The law distinguished between two forms of projects :

(a) An "Economic Project" which meets the conditions above.

(b) An "Approved Economic Project" which in addition to the above conditions should meet the following conditions as well:

(1) In the case of an industrial project, the value of its machinery, tools and equipment should not be less than JD 5000.

(2) In the case of a tourism project, its cost should be not less than JD 15000 excluding the cost of land.

(3) A housing or land reclamation projects' cost should be not less than JD 25000, excluding the cost of land.

Within this framework, the tax incentives[30] vary according to the classification of the project. An approved economic project is exempt from income taxes (including the Social Service tax) for a period of six years, and from all customs duties on fixed assets imported within the first three years of its approval, or, if imported for expansion subject to the condition that such imported fixed assets shall not be less than 25% of the total value of the fixed assets of the original project. The period of income and property tax exemptions is extended to nine years if the project fulfils one of the following two conditions: (a) It is a public shareholding company, and/or (b) Is implemented outside the Capital Governorate (Amman). In contrast, the economic

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30. The Law provides also other non-tax incentives, such as state land for approved economic projects undertaken outside the Amman Governorate, as well as guarantees to the transferability of funds abroad. Ibid., p.72-73.

project exemption from all or part of the above taxes is subject to the approval of the Council of Ministers, however, it is automatically granted the import duty exemption. It is therefore clear that, in addition to the general investment promotion, the law seeks to promote regional development and wider distribution of capital ownership.

Since the introduction of the 1972 law, apart from scattered data on the number of projects and their capital there has not been any attempt to evaluate the incentives provided by the law and the likely impact on the investment outcome. However, in 1979 the Economics Department of the Royal Scientific Society carried out the only survey to that effect. Our analysis here draws heavily on the data provided by the said survey.

The number of projects that benefited from the law and their investments are presented in Table (4.10). The evidence indicates that the utilization of incentives has increased dramatically in the last three years, i.e. 1976-1978, with an increase in the value of investments in 1976 in as much as the accumulated total of the previous four years, and continued rising since then to reach a total of JD 113 million for the period 1972-1979 for the completed projects. The number of completed projects increased from only 8 in 1972 to a total of 360 projects during the whole period, along with 187 projects under construction.

Although one of the objectives of the Encouragement of Investment Law was to enhance the inflow of foreign capital, available data indicates that foreign investment formed only 5.5 per cent of the total investment during the period 1972-78 as well as 7.9 per cent from other Arab countries[31]. This clearly indicates that the incentives have attracted

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31. Ahmad Al-Ahmad, Investment Promotion In Jordan. (Amman : Royal Scientific Society). (Forthcoming), Table (1.3), p.62.

Table (4.10) Investment Projects Under the Encouragement of Investment Law, 1972-1979
(In number of projects and millions of JD's)

Year	Approved Economic Projects			Economic Projects			Total Completed Projects	
	Completed		Under Construction			Under Construction		
	No.	Value	No.	No.	Value	No.	No.	Value
1972	6	1.860	6	2	0.534	2	8	2.394
1973	27	6.115	19	12	0.361	5	39	6.476
1974	27	4.720	20	14	0.195	6	31	4.915
1975	25	4.499	12	17	0.717	12	42	5.216
1976	33	12.295	27	56	5.964	27	89	18.259
1977	25	13.713	26	27	2.670	20	52	16.383
1978	24	25.553	2	38	5.033	3	62	30.586
1979*	11	23.860	-	26	5.195	-	37	28.785
Total	178	92.435	112	182	20.669	75	360	113.104

Source : Dr. A. Al-Ahmad, Investment Promotion in Jordan", Unpublished. (Amman : Royal Scientific Society). pp. 53-56.

* Represents five months only January - May, 1971

only a small amount of foreign capital. This appears to be consistent with results obtained in other developing countries. For example, in a survey of comparable investment incentives offered in developing countries, it has been found that these incentives tend to have little, if any, effect on foreign capital inflow[32].

Moreover, when the geographical distribution of investments is taken into consideration, little success, if any, could be noticed. The criteria for regional development was intended to allocate investments to regions other than the capital Amman. However, as Table (4.11) demonstrates, 62.4 per cent of total investments of completed projects was in Amman, and if the 24.2 per cent of Zarka and Russifa is added, it leaves nothing but less than 14 per cent to the rest of the country, of which only 1.9 per cent went to the northern part of the country which contained the second largest populated area.

On the other hand, the value added criteria was apparently imposed to ensure a minimum labour content in the projects, in order to increase the number of employed. The implemented projects appear to have provided a total of 27 thousand jobs over the period 1972-78, Table (4.12), a relatively reasonable contribution when compared with the overall objective concerning employment set-out in the Three Year Development Plan of about 70 thousand jobs[33]. However, with the Jordanian economy not only maintaining full employment but even suffers from an acute labour shortage, it is questionable whether this criteria is valid any more.

As to the effect on the trade balance, available evidence reveals that while the ratio of imports by the investment projects to total

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32. See Grant L. Reuben et al., Private Foreign Investment in Development (Oxford, Clarendon Press, 1973) pp.120-134.

33. National Planning Council, The Three Development Plan, 1973-75. (Amman : 1972) p.20.

Table (4.11) Percentage Distribution of Investments by Geographical locations, 1972-78
(Percentages)

Year	Amman	Zarka & Russaifa	Balqq	South	Irbid & North
1972	57.6	25.6	15.6	-	1.0
1973	69.6	23.4	7.1	-	-
1974	32.9	26.3	28.5	9.0	3.2
1975	43.8	29.3	17.5	0.8	8.6
1976	70.9	12.2	11.8	2.8	2.4
1977	65.0	28.5	3.1	3.1	0.2
1978	66.1	30.4	-	3.6	-

Source : Dr. A. Al-Ahmad,"Investment Promotion in Jordan" Unpublished. (Amman : Royal Scientific Society). pp. 53-56.

imports of the country averaged 3.3 per cent during 1972-78, the ratio of exports to total exports, during the same period, averaged 6 per cent[34]. However, the values in absolute terms give a completely different picture whereby imports by far exceeded exports by more than three times.

The amounts of revenues foregone by the Government as a result of the tax exemptions cannot be precisely determined. As Table (4.12)

Table (4.12) Import Duties Exemptions and Employment Provided by Projects benefited from the Law, 1972-78 (value in mn of JD's)

Year	Approved Economic Projects				Economic Projects			
	Import Duties		No.of Employees		Import duties		No.of Employees	
	Value	%	No.	% of total	value	%	No.	%
1972	0.107	47.9	261	32.5	0.116	52.1	543	67.5
1973	2.425	95.1	510	43.2	0.125	4.9	669	56.7
1974	3.120	94.7	935	53.9	0.175	5.3	798	46.0
1975	2.331	86.3	1712	62.6	0.369	13.7	1025	37.4
1976	4.786	70.3	2609	61.9	2.019	29.7	1609	38.1
1977	8.414	82.1	5468	67.9	1.830	17.9	2584	32.1
1978	8.726	89.3	5675	67.7	1.046	10.7	2700	32.3
Total	29.909	84.1	17170	-	5.680	15.9	9928	-

Source : Dr. A. Al-Ahmad, op. cit., Tables 17, 22.

demonstrates, import duties foregone by the government amounted to JD 35.6 million during the period under consideration with the largest increases taking place in 1977 and 1978. There is no available data as to the revenues foregone in the form of income taxes and property taxes. However, a rough calculation indicates a potential revenue loss of up to

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34. Ahmad Al-Ahmad, op. cit. pp.101-106.

JD 2.3 million[35] in income taxes in 1978 as well as JD 0.7 million in property taxes[36], about 2 - 2.5% of tax revenue. The revenue loss is expected to grow sharply in the future because of the recent upsurge in investment as well as the fact that a new development plan is to be launched in 1981.

Notwithstanding the fact that a clear-cut conclusion is not likely to be possible without a cost benefit analysis, coupled with the fact that no data exist as to the impact of direct taxes alone, however, the above argument suggests that the tax incentives in general terms have not been effective in attracting additional investments; they are also costly in terms of revenue foregone. However, judging from surveys done in other developing countries, Reuber suggests that such schemes are "... although they may be of some help, especially in promoting investment by small firms and by firms with relatively limited experience in L.D.C's, the impact of many of these programmes seems to be marginal at best"[37].

In view of the above argument, one is tempted to suggest a considerable limitation on tax exemptions. Certainly Jordan could limit the period of tax exemption to three years in line with that available in Syria. Instead more emphasis is needed on favourable business climate, liberal exchange regime and sound labour practices - factors for which Jordan has good record. As for the regional development, given the fact the existing tax preferentials had virtually little, if any, effect, the potential revenues could provide better infra-structural services in parts of the country outside the capital city (Amman), and perhaps could ensure a more reasonable distribution of investments.

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35. Assuming a yield of 20% rate of return that would have been taxed at 38.5 per cent rate of shareholding companies and at an average 20 per cent for other business.

36. By assumption.

37. Grant L. Reuber, et al., op. cit., p.120.

4.2.3 Income and Wealth Redistribution Effect

It is generally accepted that the main purpose of the fiscal system, particularly in the early stages of economic development is to raise adequate revenues to finance government expenditures. It is therefore, not surprising to see that the redistributive aspect of direct taxation is being given second or third priority. However, the redistribution of income and wealth in developing countries has recently become a matter of major concern which reflects increased awareness of the economic, social and political costs of income inequality. We may not need statistical evidence to show the ineffectiveness of direct taxes in Jordan as means of income redistribution. The fact that direct taxes have failed to fulfil the revenue aspect, may in itself be an indicator to how much effect on income distribution such taxes have had. Clearly, the land and property owners bore no tax burden of any significance, and relatively the corporate sector, particularly the shareholding corporations were subject to the highest tax burden.

Although progressive tax rates have been used, the imposition of taxes appears to have no significant effect as to the redistribution of income. It is true that the application of progressive tax rates may be viewed as means of income redistribution. Yet it is equally true that unless certain conditions are met, progressive tax rates themselves are not enough to fulfil this function. The progressive tax rates should be fully applied to be effective.

It may be true that the considerable exemptions given to the public and private employees on earned income have had some effect on alleviating the tax burden on this segment of the society, however, to claim that by itself it has led to considerably lessening the degree of inequality in Jordan is far from reality for two main reasons. On the one hand, it was only recently that such a measure was taken i.e. as recent as 1976.

On the other hand, both the self-employed as well as the property owners bore no significant tax burden. More importantly, for such measures to be effective in an overall effect in narrowing the inequality gap between the rich and the poor must be accompanied by measures of applying the progressive tax rates to other groups particularly the self-employed, private companies and the like.

It is well in mind that the driving factor behind the government's discretionary changes, namely increasing the tax allowances, was the inflationary pressures which started in 1972. The aim was to eliminate or at least reduce unintended, and undesirable, redistribution affects in the general price level. Clearly, if a taxpayer's real income remains unchanged, an increase in nominal income results in either/or an increase in the taxpayer's tax liability as well as introducing people who have not been subject to tax into the tax net. This phenomena linking inflation and taxation is frequently referred to as the "fiscal drag". A report by a Committee of Enquiry into inflation and taxation in Australia recently concluded that "the interaction between inflation and an unchanged personal income tax rate schedule generates a redistribution of the tax burden through (a) dependants' and other fixed concessional deductions and (b) the progressive rate schedule. Later on, it noted that this interaction "results in a different distribution from that which is intended or was legislated and the low income large family taxpayer categories are likely to be the groups most adversely affected"[38].

The government has realized the possible effects of "fiscal drag" on income distribution and resorted to discretionary changes to minimize such an undesired effect instead of embarking upon a scheme of

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38. As cited in O.E.C.D., "The Adjustment of Personal Imcome Tax Systems for Inflation". A Report by the Committee on Fiscal Affairs, Paris, 1976, p.20.

indexation. However, it should be noted that such discretionary changes came in two occasions separated by 4-5 years in each time. If these changes are to materialize in preventing some or all the distributional effects they should be introduced either annually, if that is practical at all or at least be very frequent, say every two to three years at the most. Of course, this depends to a large extent on the administrative difficulties it imposes as well as perhaps the degree of lessening the effects of inflation the government is considering.

Another factor which is believed to have had some impact on income distribution in Jordan is the exemption of income accruing to residents from abroad, which is apart from the enormous revenue loss violates the equity criteria. There is no available data as yet concerning the distribution of Jordanians working abroad by income class. However, availabile evidence suggests that most Jordanians working abroad are highly skilled people, as the results of the Multipurpose Household Survey of 1977 showed, Table (4.13) below.

Table (4.13) Occupational Distribution of Jordanians Working Abroad

	%
Engineers	2.3
Doctors	1.1
Chemists	0.9
Medical nurses	0.9
Accountants	3.8
Teachers	10.8
Administrators	2.9
Tailors	1.5
Blacksmiths and metal workers	3.9
Workers with mechanical skills	14.5
Construction workers	2.4
Drivers	1.9
Other occupations	47.8
	100.00

Source : Dept. of Statistics, The Multipurpose Household Survey, (Amman, 1976)

As the Table above reveals about 50 per cent of the immigrants are among the middle and upper-income classes. In actual fact there has been some speculation recently that remittances from Jordanians working abroad are about to create a new class of land and estate owners new to the Jordanian scene. This was a stress to the fact that a large fraction of remittances is being invested in land speculation transactions.

Remittances from abroad not only adds to the ability-to-pay but is considered a great source of income in the Jordanian case, particularly when it is recognized that income from remittances is estimated at JD 2 billion annually of which only JD 180 million is being remitted through the banking system[39], i.e. about 21% of G.N.P. in 1979.

There has been arguments about the feasibility of taxing income acruing to residents from abroad for some time. On the international level, this was first advocated by Bhagwati in 1972 on moral grounds, and the implications discussed by Bhagwati and Delfare in 1973. However, more recently the issue was given a more comprehensive economic, political and social evaluation[40].

In the Jordanian case, opponents of including such income in the chargeable income are concerned with the possibility of the country losing potential remittances, or considerable parts thereof, let alone the administrative difficulties that may jeopardise the compliance to the tax.

It is undoubtedly true that such a scheme entails a vast number of

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39. Central Bank of Jordan, "Inflationary Pressures and the Mobilization of Domestic Resources", An unpublished report prepared for the Jordan Development Conference, May 1976. See also, C.B.J. Monthly Statistical Bulletin, vol. 16, No. 5, May 1980 and C.B.J. Annual Report, 1979, p.82.

40. See Koichi Hamada, "Taxing the Brain Drain", in J. Bhagwati (ed.) The New International Order, The M.I.T. Bicentennial Studies (1977), p.125.

administrative difficulties like any other new system. However, the application of the system itself may give way over time to how to solve arising problems. On the other hand, although it is difficult to quantify in advance the potential loss of remittances if such a scheme is to be introduced, yet one could safely argue that this possibility could be markedly minimized if initially a flat rate equal to the first tax bracket of 5% is levied, of course coupled with measures for allowing appropriate credit to foreign taxes paid abroad. Certainly such a proposal, if introduced, would boost the tax revenues as well as maximizing the effect on income redistribution.

Data on the size distribution of income in Jordan is very scarce. In fact, it was only in 1973 when the Economics Department of the R.S.S. carried out the only survey on income distribution in Jordan. This makes it extremely difficult to precisely substantiate the exact impact direct taxes have had on income distribution, even in a very rough indirect manner. However, the results of that survey showed that the distribution of individual comprehensive income was more unequal in the urban areas than in rural areas. While 70% of the population received only 39% of income in the former, they received about 43% of income in rural area[41]. Comparing the results with other developing countries showed that income distribution was more unequal in Jordan[42] than that of Pakistan in 1970-71, with a Gini coefficient of 0.4253 in the former against 0.3645 in the latter. This is compared with a Gini coeff. of 0.4647 in India and 0.5037 for Malaysia. But a developed country such as Korea has had a far less Gini coeff. of 0.3381 in 1971 which indicates a much better distribution of income than that which is to be

41. For details see Ghazi Assaf", The Size Distribution of Income in Jordan in 1973. (Amman : Royal Scientific Society, 1979).

42. Taking into consideration the percentage share of income by ordinal groups in urban households as the data available on other countries permits with the closest period of time possible.

found in Jordan, Table 4.14.

Table (4.14) Percentage Share of Income in Urban Household in some Developed and Developing Countries

% of Population	Malaysia (1970)	India 67-68	Jordan 1973	Pakistan 70-71	Sri Lanka 69-70	Korea 71
0-10	1.5	2.0	1.93	3.2	2.4	3.4
10-20	2.8	3.2	3.77	4.5	3.7	4.7
20.30	3.7	4.2	4.80	5.3	4.6	5.7
30-40	4.6	5.0	5.79	6.1	5.6	6.6
40-50	5.6	6.1	6.21	7.1	6.7	7.4
50-60	7.0	7.3	7.45	8.2	7.9	8.6
60-70	8.6	8.9	8.56	9.7	9.6	9.8
70-80	11.1	11.2	10.47	11.5	12.0	11.6
80-90	15.1	15.0	14.01	14.7	15.8	14.5
90-100	40.0	37.1	36.97	29.7	31.7	27.7
Gini Coeff.	0.5037	0.4647	0.4253	0.3645	0.4100	0.3381

Source : (i) Shail Jain, "Size Distribution of Income : A Compilation of Data" (Washington D.C. : World Bank Publications, 1975).

(ii) Ghazi Assaf, "The Size Distribution of Income in Jordan in 1973", op. cit.

Although any comparison of this kind should be taken with caution due to the degree of data reliability in the various countries as well as the methods adopted, it nevertheless gives an idea, however crude, about the degree of income distribution in Jordan in relation to that of other countries.

By and large, one cannot say but that there is still a very significant and essential role of direct taxes within the fiscal system in Jordan to play in the area of income distribution. Perhaps it is worth noting again here that a better enforcement of income tax rates could prove to be crucial in this respect, as well as a more rigorous way of indexing income tax to inflation. This could possibly be done through the adaptation of an automatic indexing scheme.

4.3 The Responsiveness of Direct Taxes

In evaluating a given tax structure, the responsiveness of tax revenue to change an income has often been singled out as a vital criteria. This response of taxes is usually measured by the tax elasticity and the built-in flexibility of the tax (some times termed tax bouyancy), the former measuring the automatic growth of revenue of a given tax in response to income while the latter includes the effect of discretionary changes, i.e. changes in the legal structure, tax rates and tax base, as well as improvements in tax administration or efficiency. The differentiation stems from the fact that the growth of the tax revenue may come from such discretionary changes rather than an automatic one[42].

In estimating the income elasticity of a given tax two main problems are usually singled out, (a) The mathematical formulation by which to estimate the elasticity of the tax revenue with respect to income, and (b) Isolating the discretionary measures concerning the tax rate and tax base and other administrative improvements.

As far as the first problem is concerned, the elasticity estimates, in general, are obtained through the application of a power function of the form,

$$T_t = a\, Y_t^{b} \qquad (1)$$

where, T_t is the tax yield and Y_t is national income or any income variant.

This equation could be transformed into a double logarithmic form

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42. This element has been treated in a number of studies, see for example Raja J. Chelliah, "Trends in Taxation in Developing Countries", op. cit. pp.254-331; Alan R. Prest, "The Sensitivity of the Yield of Personal Income Tax in the United Kingdom", The Economic Journal, vol. LXXII, (1962) pp. 576-596; G.S. Sahota, Indian Tax Structure and Economic Development, (London, 1961); and J. Levin, "The Effects of Economic Development on the Base of a Sales Tax : A Case Study of Columbia", I.M.F. Staff Papers, Vol. XV (1968), pp.30-101.

given by,

$$\text{Log } T_t = \log a + b \log Y_t \qquad (2)$$

Equation two above contains an important assumption that the income elasticity of the tax, given by the coefficient (b) is constant over a range of income considered. Recently however, this constant income elasticity has been subject to some criticism[43].

The difficulty of isolating discretionary changes of tax rates or tax base have been widely discussed in literature and several methods of estimation have been developed. In general two methods have been frequently discussed and considered here in turn[44]. The first method used figures of actual tax receipts and data on the monetary value of the legal tax base and the corresponding tax rates. Figures of actual tax receipts are then divided by indices of base and rate changes, yielding a series of net discretionary changes. This method is particularly suitable where data on legal tax bases and tax rates are available. Unfortunately such data is not available on Jordanian taxes as was alluded to before in this chapter.

Prest,[45] on the other hand, in his estimation of the sensitivity of personal income tax yield in the U.K., used an alternative method of separating the effects of the discretionary changes. His method

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43. See for example N.M. Singer "Estimating State Income - Tax Revenues : A New Approach", The Review of Economics and Statistics, Nov. 1970, who advocates a non-constant income elasticity or more specifically a declining one; also see M.J. Wasylenke, "An Estimation of Elasticity of the New York State Personal Income Tax", Occasional Paper No. 13 (Syracuse, N.Y.: Metropolitan Studies Program, Syracuse University, March 1974); and ———————— , "Estimating the Elasticity of State Personal Income Taxes", National Tax Journal, March 1975.

44. C.Y. Mansfield, "Elasticity and Bouyancy of a Tax System : A Method Applied to Paraguay", I.M.F. Staff Papers, vol. 21, No.2, July 1972.

45. A.R. Prest, "The Sensitivity of the Yield of Personal Income Tax in the United Kingdom", op. cit.,

involves two subsequent steps. First, a preliminary series of adjusted tax yields is prepared by subtracting from the actual yield for each year the estimated amount attributed to the discretionary changes in that year. This "adjusted" series is then further refined by the application of the formula discussed below to form the "final" series that excludes the continuing impact of each discretionary change on future years, so that the elasticity of a given tax structure in the base year may be estimated.

The Prest formula may be explained symbolically as follows[46]:

(a) T_1, T_2, ... T_t, T_n are actual tax yields for a series of years.

(b) D_1, D_2, ... D_t, D_n measures the effects of a discretionary change in the t^{th} year on the t^{th} revenue return.

(c) T_{ij} indicates the j^{th} year's actual tax yield adjusted to the tax structure that existed in year i.

If i = 1 is the base year, the series T_{11}, T_{12}, T_{13} .... T_{1t}, ...T_{1n} represents what the tax would have been if the tax structure had remained as in year one with all discretionary changes moved from the years following year one. This theory could therefore be developed as follows :

$$T_{11} = T_1$$

$$T_{12} = T_2 - D_2$$

$$T_{13} = T_{23} \times \frac{T_{12}}{T_2}$$

$$T_{14} = T_{34} \times \frac{T_{23}}{T_3} \quad \frac{T_{12}}{T_2}$$

$$T_{1j} = T_{j-1.J} \times \frac{T_{j-2.J-1}}{T_{j-1}} \quad .... \quad \frac{T_{23}}{T_3} \times \frac{T_{12}}{T_2}$$

46. C.Y. Mansfield, op. cit., p.429

However, this method could not be applied in the case of Jordan as well, due to reasons already stated before. Instead, an alternative, but a more approximate, method was used. The data was divided, in the case of income tax, first into three chronological periods; (i) 1954-1963 which were characterized by no tax rate changes, (ii) 1954-1970, which although there were no significant changes yet it captured the introduction of the 1964 law; and (iii) 1954-1979 which captures, among other things, the effects of changes in the administrative machine, the growth of the tax base and changes in the allowances and concessions as described in section one. The same chronological periods classification were then applied to property taxes

The model which will be used to measure the elasticity relationship is the simple least squares regression equation of the double-logarithmic form of the form,

$$\text{Log } T_{it} = \alpha + \beta \log Y_t$$

where, T_{it} is the yield of income tax, and,

Y_t is G.D.P. at factor cost current prices.

The results are given in the following equations,

(i) 1954-1963

$$\text{Log } T_{it} = -5.14 + 1.09 \text{ Log G.D.P.}$$
$$(13.3)$$

$R^2 = 0.96$ DW = 2.60 No of observations = 10

and figures in parenthesis are t-values.

The income elasticity of the income tax during this period is 1.09. When the period was extended to cover 1954-1970, during which the 1964 law was enacted, yet now changes in tax rates have taken place,

the results are given by the following :

$$\text{Log } T_{it} = -6.13 + 1.33 \log \text{ GDP}$$

$$(14.26)$$

$$R^2 = 0.93 \quad DW = 1.47 \quad \text{No of observations} = 17$$

The tax elasticity during this period is (1.33). This indicates that the addition of the seven year period had increased the tax elasticity by (0.24), which could be attributed to the autonomous growth rather than to discretionary changes. However, taking the whole period into account, 1954-1979, i.e. adding another nine-years during which most of the changes in the tax rate and tax base have taken place, the results are given by the regression equation,

$$\text{Log } T_{it} = -7.48 + 1.63 \log \text{ GDP}_t$$

$$(13.13)$$

$$R^2 = 0.97 \quad DW = 1.55 \quad \text{No of observations} - 24$$

Clearly the tax elasticity has increased to 1.63. One could conclude from this change in the elasticity that, the introduction of the last period i.e. 1971-1979 during which discretionary changes have taken place has its impact in increasing the tax elasticity, which might be considered to have come mainly due to discretionary changes in addition to the autonomous growth of the tax.

However, one should be absolutely clear about the fact that this kind of analysis leaves us no way nearer verifying each of the effects of tax rate and tax base changes to reach to the proper tax elasticity estimation. Yet the continuous improvement in the tax elasticity may indicate an improvement in tax effort particularly during the 1970's. This is, of course, a proxy method and in no way could be considered a substitute for the proper isolation of tax base and tax rate change's effect on the tax elasticity.

However, another common technique for estimating the income elasticity of income tax when exogenous changes occur in such a functional relationship is to introduce a dummy variable for each exogenous change. Three dummy variables were then introduced to cater for the discretionary changes along with variables for income and prices. This method could only be applied for the period 1967-79 for two main reasons. On the one hand, inflationary pressures as was mentioned in several instances in this study, started only during this period particularly since 1972. On the other hand, prior to 1967 there has been no price index which was only introduced since then.

Accordingly, a linear relationship was fitted with the inclusion of three dummy variables reflecting changes in rates and taxable income base during 1975, 1976 and 1979 respectively. The type of equation fitted may be written as:

$$T_i = a + by + c\Delta P + \sum_{i=1}^{h} d_i D_i$$

This equation was also transformed into double-log and semi-log forms. The simple linear form, as written above, gave the best fit to the data, and the results are given in the following.

$$T_i = \underset{}{-3.97} + \underset{(21.03)}{0.041\,Y} - \underset{(-1.34)}{0.06\,\Delta P} + \underset{(3.28)}{2.81\,D_1} - \underset{(-0.91)}{0.77\,D_2} - \underset{(-0.78)}{0.87\,D_3}$$

$R^2 = 0.99$ DW = 2.37 DF = 7

where,

T_i = income tax

Y = GDP at market prices

ΔP = Change in the consumer price index

$D_{i(i=1,2,3)}$ = Dummy variables for changes in tax rates and tax base during the years 1975, 1976 and 1979 respectively, and

figures in parentheses represent t-values.

From the above equation clearly the only significant variables were found to be Y and D_1. Therefore, at first we dropped the ΔP variable and no significant change took place, then all variables which were not statistically significant were dropped and only significant ones were retained, the results are given in the following equation,

$$T_i = -4.09 + 0.038\ Y + 2.63\ D_1$$
$$\qquad\qquad (29.29) \qquad (3.18)$$

$R^2 = 0.99 \qquad DW = 2.37 \qquad DF = 8$

and the variables are as explained above.

The results in the above equation show that the two variables explained most of the variations in income tax, and both were significant at the 1% level of confidence. The DW-statistic associated with the equation ruled out the existence of autocorrelation. In order to estimate the income elasticity of income tax without the discretionary changes, we calculate the T_i from the above equation and then this was re-run against Y. The results are :

$$T_i = -3.84 + 0.0378\ Y$$
$$\qquad\qquad (30.04)$$

$R^2 = 0.98 \qquad DW = 2.15 \qquad DF = 11$

Here it is clear that Y was highly significant at the 1% level and there was no autocorrelation. Utilizing equation (2) page (74) we calculated the elasticity which was found to be (1.51). This result confirmed our previous results and certainly this is a good sign.

In what follows we intend to argue for the introduction of a capital gains tax, also arguments for or against considering death duties are presented.

4.4 A Case for Some Other Selected Direct Taxes

Our concern in this section is to briefly embark upon an appraisal of the arguments and the potential applicability of two main direct taxes, namely a capital gains tax and death duties, the absence of which may probably have contributed to a more unequitable distribution of the tax burden in Jordan.

4.4.1 Taxation of Capital Gains

It is generally accepted that capital gains form a proper source of taxation in developing countries. A capital gains tax is one that is levied on the appreciation of capital assets and is commonly imposed only when the increase in value is realized through sales or exchange[47], i.e. capital gains taxation on the basis of realization and not on the basis of accrual[48].

Capital gains in developing countries are mainly from land speculation, sale or exchange of real estate, rather than from securities as is the case in developed countries. Speculation booms in real estate values have occurred in recent periods both in developed and developing countries. This may have induced the argument that the resulting transfer of resources is a considerable deterrent to economic growth[49].

In developing countries, the increased speculation in property could be explained by the existence of a number of fators, the most important of which are the following:

(i) The lack of developed capital markets, let alone there existence in most developing countries;

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47. Juanita D. Amatong, "Taxation of Capital Gains in Developing countries", I.M.F. Staff Papers, vol. XV, No.2, (July 1968) pp. 344-384.

48. In spite of the fact that generally the tax is commonly imposed on the realization of the gains, however it is worth noting that this area is still subject to academic debate as to whether the basis of the tax should be on the realization or accrual of the increase in the value of capital assets.

49. See John W. Lowe, "Land Speculation, Does it have a Real Economic Consequence?", Finance and Development, vol. 12, 3, 1975, p.30.

(ii) A means for hedging against inflation;

(iii) The considerable growth of urban centres;

(iv) The concentration of wealth, in these countries, in the form of real estate;

(v) The widespread use of bearer shares, which makes it difficult to enforce a tax on capital gains arising from securities[50].

The above features which are considered a stimulus for real estate speculation are widely at work in the Jordanian economy. During the 1970's, the demand for land as a value-accumulating capital increased drastically. This demand is governed by three main motives: First, the lack of a capital market, which was only recently established in early 1978, made investment possibilities limited, therefore the capital was often geared towards the purchase of land. Secondly, the inflationary pressures which started in 1972, coupled with excessive liquidity in the economy owing to the large amounts of remittances by Jordanians working abroad, made investment in land not only the best way to secure the value of currency but to also make the best possible return in a very short period, due to the spiralling prices of land generally at a much faster rate than other prices. In view of the absence of a capital market, the expectancy of a land price increase was of the same nature as the expectancy, in developed countries, for an increase in stock value. Even after three years of having a capital market in Amman, land speculation has not subsided and is still considered the best way for investment.

It is argued however, that the appreciation of capital assets during an inflationary period is merely a paper gain therefore, illusory. Because inflation raises the nominal value of assets without a corresponding increase in real values, some economists oppose a tax

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50. Juanita D. Amatong, op. cit., p.346.

on capital gains under inflationary conditions[51].

However, capital gains taxation in developing countries may generally be justified both on equity and economic grounds. The equity reason for taxing capital gains must take into consideration the taxpayer's ability-to-pay and the benefits he receives from the government. Capital gains increases the taxpayer's ability to pay to the extent that it makes him better off. However, it is to be recognised that the ability-to-pay principal does little to indicate the appropriate magnitude of the tax[52]. On the other hand, it is argued that the upper bracket taxpayers may probably feel that, under the progressive income tax, they are paying proportionately more in comparison to the benefits they receive. However, it is equally argued, apart from the effect of inflation, capital gains come about as a result of the general economic development which is largely created, inter alia, by government spending therefore, benefiting those taxpayers both directly and indirectly.

By and large, taxing capital gains on equity grounds, as means of income and wealth redistribution, is fully justified particularly if taken from the point of view of the ability-to-pay principle. Certainly there is no justification in taxing earned income and leaving aside unearned income in the form of capital gains. The United Kingdom Royal Commission on Taxation noted that "capital gains increase a person's taxable capacity by increasing his power to spend or save, and since capital gains are not distributed among the different members of the taxpaying community in fair proportion to their taxable incomes but are concentrated in the hands of property owners (and particularly the owners of equity shares) their exclusion from the scope of taxation constitutes a serious discrimination in favour of a particular class

51. Ibid., p.356.

52. Henery C. Wallich, "Taxation of Capital Gains in the Light of Recent Economic Development", The National Tax Journal, vol. XVII No. 2, (June 1965), pp. 135-150.

of taxpayers".[53]

The effects of capital gains on economic development are particularly pronounced on the supply of saving and the composition of investment. On the one hand, it is argued that a capital gains tax reduces savings more than an income tax of the same yield because of the nature of the former, i.e. being a non-recurrent tax, it is likely to be paid out of capital. However, one may equally argue that if this is true it would affect private savings, yet the overall savings rate may not necessarily be affected because it would be merely a transformation of private savings to government savings.

Moreover, it is argued that capital gains are not likely to be depended upon to finance consumption expenditures and those who receive capital gains are not likely to increase their consumption substantially[54]. It is suggested that preferential treatment of capital gains affects the composition of investment in that a capital gains tax at a low rate induces the transfer of resources from those which yield income tax at higher rates to those which yield capital gains. Also, lower tax rates on capital gains than on ordinary income favour the retention of profits in the corporate sector rather than re-investing them, therefore reducing the availability of funds for new investments[55].

In addition to the above argument, it is acknowledged that several problems may be envisaged when a capital gains tax is imposed. Briefly, such problems could be summarized in the following:

(i) The Lock-in Effect : This effect has been subject to a great deal of controversy. This effect is associated with the rate of a tax on capital gains. It is held by a number of economists that a

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53. The Royal Commission on Taxation of Profits and Income, Final Report, (London, 1955), p.365.

54. For more details see Wallic, op. cit., p.142.

55. Ragner Nurske, Problems of Capital Formation in Underdeveloped Countries. (New York : Oxford Univ. Press, 1953), pp.4-31.

capital gains tax may inhibit the sale of capital assets which have appreciated in value[56]. Accordingly, this may well result in a reservation of the price of assets and a reduction in the flow of funds as was argued earlier. However, it is not yet clear how strong this effect is, and in case that it is strong, how much is its effect on the economy.

Hinrich, argues implicitly that the lock-in effect is strong, by concluding that a cut in tax rates would increase revenues[57]. However, in the United States the lock-in effect of the capital gains tax has been attacked[58].

(ii) The administration difficulties of the capital gains tax has been emphasized. To administer a capital gains tax properly, records of property held; the length of the period during which they are being held; original costs, etc. are required.

(iii) There are a range of difficulties in detecting capital gains other than those due to land.

However, in spite of the fact that such difficulties may prove to be in existence in the case of Jordan particularly to those relevant to property other than land. Yet in view of the fact that no real estate transaction, sales or transfer, is considered valid without registration in the Lands and Survey Department's records, one is bound to argue that administering such a tax may not entail serious problems. Moreover, due to the fact that rechannelling of investments from real estate speculation into more socially productive investments is particularly needed in this phase of development, it is my strong belief that a capital gains tax will prove to be highly productive, provided the

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56. Amatong, op. cit., p.360

57. See Harley H. Hinrich, "An Empirical Measure of Investments Responsiveness to Differentials in Capital Gains Tax Rates Among Income GRoups," National Tax Journal, Sept. 1963.

58 Ibid, p.361.

existence of a political well as to its introduction.

It should be noted in this context that early in 1973 the government of Jordan was convinced that the right economic environment exists for a capital gains tax, particularly as an instrument for tapping speculative gains from real estate. Therefore, a capital gains tax of a rate of 20% on gains resulting from the acquisition or sale of lands, buildings, and shares of shareholding companies was imposed[58]. In spite of the fact that this rate of the tax was probably not high enough because those who receive such gains may well be in the upper bracket on the income tax schedule, however, it was considered a positive move on the part of the government. However, due most probably, to the political pressure groups the law did not last long and was repealed in 1974[59].

There is no doubt in my mind that, the conditions that led to the consideration of the tax in 1973, were further accentuated by the developments in the economy that took place since then, and given further support for the need of a capital gains tax.

4.4.2 Death Duties

Literature dealing with the financial theory often distinguishes between two main forms of death taxation. These forms are an estate tax and an inheritance tax. The estate tax may be regarded as "the testator's last tax", and the inheritance tax be regarded as "the first tax on the inheritor[60]. According to the first view point, the rates for a death duty should depend on the total size of the inheritance, i.e. the tax base comprises all the assets minus the liabilities of the deceased person at the time of his death. According

58. Government of Jordan, Provisional Law No. 53 of 1973. Official Gazette, No. 2450, P.213, Oct. 8, 1973.

59. Official Gazette, No. 2488, p.708

60. Leif Johansen, Public Economics, (Amsterdam : North-Holland Publishing Co., 1965), p.205.

to the second point of view, an inheritance tax is levied on the property received by the beneficiaries.

The justification of death duties relies heavily on equity criteria in the sense that property gained through inheritance denies the members of the society the right of equal opportunity; the non-taxation of such inheritance leads to a concentration of wealth and increases the ability to pay of the beneficiaries. On the same grounds, presumably death duties work to break the concentration of wealth as well as reaching some of the income not reached by the income tax, therefore considered an equitable tax.

Although death duties may not be regarded as an important source of revenue, their application is fundamental to the redistribution of income. The relative importance of revenues from death duties in developed countries as a percentage of GNP has been very low. For example, the ratio was in 1969 as follows, United Kingdom 0.82; Belgium 0.34; France 0.20; Germany 0.07; Italy 0.22; and the U.S. 0.48[61].

Moreover, any system of death taxation encounters basic obstacles, which are not easily overcome in a logical and feasible fashion. Such problems or obstacles could be summarized by the following[62]:

(i) The tax must apply to a base which does not involve a market transaction. Consequently, no automatic valuation is possible; a deliberate administrative valuation of property must be made, as with property tax, a task which is very difficult to achieve particularly with complex estates.

(ii) The transfer of property is not limited to death occasion; the existence

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61. M.A. Rogers, "The Taxation of Personal Wealth in the United Kingdom: An Appraisal of the Argument for Extending the Tax Base of the Present System". Unpublished M.Sc. Dissertation, U.C.N.W., 1974.

62. John F. Due, Government Finance : An Economic Analysis, (Homewood, Ill.: Richard D. Irwin, Inc. 1959), pp. 360-362.

of a death tax may stimulate the making of gift before death, hence a gift tax has to be simultaneously applied.

(iii) The peoples anticipation of death and death tax effects may stimulate the adjustment of property holdings, which will greatly determine the final tax liability.

(iv) Another disadvantage of inheritance tax is that payment of tax has to be deferred until the heirs have been ascertained and the estate is available for distribution.

However, taking into account the above arguments, the Five Year Plan[63] recommended that the government introduce a death tax, more specifically an inheritance tax. Yet in view of the absence of any detailed discussion of the form of tax, it is assumed that its introduction is still an open question.

Among other Middle Eastern countries, the Sudan introduced an estate tax in 1974[64] with a differential or progressive tax rates in accord with the degree of consanguinity. Special tax rates were applied to the first group of heirs, i.e. children, wives, and parents of the deceased. For the second class of heirs the tax rates are doubled. In Saudi Arabia estate tax is imposed in accordance with the provisions of the Koran. Syria and Morocco apply progressive inheritance taxes, differentiated according to the degree of consanquinity and the size of the benefit. In all these countries the revenues generated from death duties were minimal[65].

Notwithstanding the fact that there is precedent for the introduction of a death tax in Arab and Muslem countries, coupled with the fact that a death tax has an advantage in terms of equity, yet it would be more advisable that scarce administrative efforts should be used for potentially more

63. National Planning Council, The Five Year Development Plan, 1976-1980. (Amman: 1976) p.

64. Ahmad Salamah, "Financing Economic Development with Particular Reference to Taxation in Sudan", Unpublished Ph.D. Thesis. U.C.N.W.,1976

65. For more details see Ahmad Imam." "Le droit de succession dans la religion islamique" Bulletin for International Fiscal Documentation, vol 30 (1976), pp. 367-79.

lucrative sources.

4.5 Concluding Remarks

"The analysis of direct taxes advanced in this chapter revealed that, direct taxes have failed to achieve any of its macro-objectives as part of the objectives of the fiscal system in general. This was probably a result of two main factors. Some deficiencies in the legislation itself on the one hand, and more importantly administration weaknesses aggravated by political pressures and the characteristics of the economy."

"The income tax law grants the taxpayer, particularly those on the top bracket, generous allowances coupled with a limitation on the income tax base to cover income only generated within the country. The administration is so far unable to reach, in a proper way, a wide range of taxpayers particularly traders, professions and self-employed. This situation may be a result of both the reasons alluded to above, as well as problems from within the department aggravated by the failure on the party of the government to back it up either morally or physically in terms of developing its staff capabilities, equipment, and more incentives to recruit highly capable people.

On the other hand, it was clear that the bulk of the growth in income tax, particularly during the seventies, came from the growing corporate sector, having in mind that the law exempted all but a small number of government employees. The former sector is still seen to be of great potential for income taxation. However, if a better utilization in its taxable capacity is to be fruitful, then a number of issues as discussed in the text have to be confronted such as, introducing a new differential rate; tax on dividend be set-off and refundable; set-off of loss carry foward against half chargeable income in the first six subsequent years should be reconsidered etc.

Most important of all is that of property taxation, which probably needs more attention in the administration of the taxes and proper implementation of the law. This could prove to be extremely important

if direct taxes are to be an instrument of fiscal policy, and if they are to achieve any of the prescribed objectives of the fiscal system. Measures of better administration, preventing the delinquency of the tax, and restricting, to the largest extent possible, of the number of the appeal cases, as well as revision of the rental and capital values of lands and buildings more frequently, all are points in hand.

Finally, two more direct taxes argument about which were presented, i.e. capital gains tax and death duties, should be given a priority in terms of their introduction. It is strongly aknowledged that failure to introduce these taxes may hamper the achieving of some of the tax system's objectives, particularly the redistribution objective. It is hoped that the arguments for and against these two taxes could provide a background for more fruitful discussion in favour of their introduction.

In Chapter five our attention is given to an anlysis of the indirect taxes in Jordan, by which a more complete assessment of the tax system of Jordan and its consequences will be presented.

CHAPTER FIVE

INDIRECT TAXES : STRUCTURE AND DEVELOPMENT

An indirect tax is defined by the Oxford English Dictionary as one which is "not levied directly upon the person on whom it ultimately falls, but charged in some other way, especially upon the production or importation of articles of use or consumption, the price of which is thereby augmented to the consumer, who thus pays the tax in the form of increased price". Such a definition combines some aspects of indirect taxes, that is, the administrative; the base of the tax; shifting and incidence of the tax. Accordingly, one way of distinguishing indirect from direct taxes, is through reference to the fact that the former is not directly levied upon the person who ultimately bears the tax through its imposition on goods and services produced domestically or imported. Another way of distinction between the two forms of taxes is by reference to shifting and incidence of the tax. It has often been suggested, as it is obvious in the above definition, that indirect taxes are shifted forward to the consumers from the corporations through price adjustments while on the other hand, direct taxes are imposed on persons or households and are not easily shifted. However, more recently there has been reason to suggest that corporate profit tax, which is a direct tax on corporations can be shifted forward to consumers as much as any indirect tax[1]. Accordingly, it could be argued that so far there has been some ambiguities as to definition, nevertheless the distinction is still widely used based on simple criteria of admininstration and perhaps political

1. See B.C. Mehta, "Short-Run Incidence of Corporate Income Tax in India", The Indian Economic Journal, vol. 26, July 1978; Martin Krzyzanik and Richard A. Musgrave, The Shifting of the Corporation Income Tax : An Empirical Study of its Short Run Effect upon the Rate of Return, The John Hopkins Press, 1963; Karl W. Roskamp, "The Shifting of Taxes on Business Income : The case of West German Corporations", National Tax Journal, vol. XVIII, No. 3, Sept. 1965, pp.247-254; Gurcharam S. Lumas, "The Shifting of the Corporation Income Tax in India", Economia Internazionale, vol. 22, 1969, pp. 283-291.

significance, if nothing else.

"By and large, indirect taxes may be categorized into sub-groups of interest on the following features[2]:

(a) One product vs. many products : levies on one product such as tobacco; alcohol, betting etc. are often levied at very high rates compared with other taxes on broad ranges of goods.

(b) Ad Valorem vs. Specific taxes : the tax may be graded as to the value or the number of units of purchase or sale.

(c) Single-stage vs. multi-stage taxes : a tax may be levied at the manufacturing, wholesale or retail stages of production or at several stages of production and distribution process, and

(d) Gross value vs. net value : at whatever stage the tax may be levied, some deduction may be allowed from the value which is taxed or not."

This much said, the present chapter analyses indirect taxes by focussing on their structure and development. Areas of possible reforms are singled out. In section one, taxes levied on international trade, namely, import and export duties, are dealt with. This is followed in section two with a further look into the excise system dealing whenever possible with excises on the product level with an examination of the basis for expanding the excise system. Section three focuses on other taxes on service and transactions, singling out the two most important taxes, i.e. the land and building sales tax and that on automobile registration and licencing, examining both of them in some detail. Section four completes the analysis by computing the elasticities of indirect taxes and their results analysed.

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2. Douglas Dosser, "Indirect Taxation and Economic Development", in in Milton Taylor (ed.), Taxation for African Economic Development, (London : Hutchinson Educational, 1970).

5.1 Taxes on International Trade

In the present section, taxes levied on international transactions are discussed. Both customs duties with their supplements and export taxes are presented in turn.

5.1.1 Taxes on Imports

5.1.1.1 The Structure of Customs Duties

Customs duties are considered among the oldest forms of taxation imposed upon the importation of goods. As observed by Hinrichs, "... Simple direct taxes, such as the poll tax, are the pioneer forms of taxation, but customs typically came to play a major role in tax structure as development progressed from the most primitive years[3]". Developing countries came to rely significantly on customs duties to finance development programmes or more specifically generating higher revenues, because essentially these countries started from depending on agricultural production and fulfilling their consumption needs through imports particularly in the early development phases. Even when developing economies get under way in the process of development they are bound to have open economies not only to meet their consumption needs, but also for capital and intermediate goods necessary for development in later stages.

Customs duties have several advantages. The most obvious one, is that they are considered administratively easier to implement than other forms of taxation because it is easy to spot imports on ports of entry, and therefore provide the much needed sums of revenues for development financing. Although it is recognised that a better enforcement needs relatively more trained personnel, yet it is generally held that they have the added advantage that their cost/revenue ratio is relatively small in comparison with other taxes.

3. H. Hinrichs, A General Theory of Tax Structure Change During Economic Development, (Cambridge : Harvard Law School, 1966).

In designing tariff structures, developed countries very often find themselves constrained by international agreements on trade and therefore may be vulnerable to retaliation. As for small developing countries, they seem to have the added advantage in that respect of having a small economy as most recently defined by Steedman as "one whose relative importance in world trade is sufficiently small that the economic actions of its capitalists and its government will have no effect on the relative prices at which commodities are exchanged on the world market".[4] To that extent, small economies with equally small share of world trade are more able to avoid retaliation to their tariff policies.

Moreover, custom duties are considered a valuable tool in restricting imports of consumer goods, particularly those which are considered "luxuries", as well as capital goods which deemed to be unnecessary, at the time, for the development efforts.[5] In that context, to the extent that the duties are successful in restricting imports of consumer goods, they may positively affect the saving/GNP ratio in the economy. However, this may be qualified in the sense that the less the people find other alternative spending channels, either in the form of domestically produced goods or other forms of spending, i.e. expensive overseas holidays, the more the effect on the saving/GNP ratio.

Furthermore, it is held that customs duties are less likely to interfere with incentives in the economy in comparison with other domestic taxes. More importantly, the government could influence the form of investments in the economy through the variation of rates on imported capital goods. This is particularly important when a choice between capital intensive vs. labour intensive technology is necessary to cater for labour market situations. While it is recognised that direct intervention in the planning process to

4. I. Steedman, Trade Amongst Growing Economics (London : The Macmillan Press Ltd, 1980), p.35.

5. J.F. Due, Indirect Taxation in Developing Economies. (London : The John Hopkins Press, 1970.

bring about the desired capital development is considered easier to implement, however, even then customs duties could be a useful tool to facilitate the planning process and to achieving the planned goals.

In addition to the fulfilment of revenue objectives, which are by far the most important in most cases, governments could cater for the equity criteria through the application of differential rates among necessities vis-a-vis luxury consumption mainly consumed by the upper income groups, in essence affecting the income distribution to a more equitable one.

However, this is by no means to suggest that custom duties are always and everywhere advantageous. They have a number of objections, depending on the particular design and structure of rates and implementation in each country and unless they are properly designed and compatible with the economic aims and priorities, they may as well result in several unwanted implications in the economy in contrast with the overall development strategy.

Having highlighted the advantages of customs duties in general, our attention is given below to the particular structure in Jordan.

1. Customs Duties (Regular Tariff)

The introduction of the tariff system in Jordan dates back to 1926 when the first customs and excise law was introduced. Up to 1957, several minor changes took place and were mainly due to a changing political situation (see chapter one), thus affecting the geographical applicability of the law particularly during the early fifties. However, by 1962 a new tariff schedule was introduced, which is still in force, along with occasional changes to meet the changing development situation in the country. Therefore, currently the basic enabling statute for customs tariff is contained in the Customs and Excise Law No. 1 of 1962, as amended in various occasions, most recently published in November 1980.

"Jordan's tariff policy is basically guided by the revenue objective and to a lesser extent by equity and development considerations." In general, import duties are higher on consumer goods and consumer durables, more moderate on intermediate and capital goods. Average nominal import duties[6] on 17 major product groups corresponding to relevant Brussels Tariff Nomenclature (BTN) chapters are given in Table (5.1). These figures roughly indicate the import duty structure and its range. These average product group duties show a range between 11% for agricultural products to 113% on beverages and tobacco in the consumer goods category in 1975 which was obviously increased relatively to 117% for the latter in 1979. As for the intermediate goods, it ranges from about 8% on mineral products to about 27% on articles of stone, glass and material products. While for capital goods, the range varied from a low of 6% for railway, aircraft and ships to 52.4% for transport motor vehicles and 20% for machinery, equipment and tools. Changes in some of the rates particularly for chemicals and footwear took place in 1976. Therefore, the average nominal duty decreased from 19.9% and 81.7% in 1975 to 17.9% and 50.0% respectively in 1979. On the other hand those on textiles and textile articles were moderately increased for protection of local industry purposes and resulted in a relative increase in the average duty from 40.9% in 1975 to 43.1% in 1979.

However, the above ranges of average duties are qualified by heavy exemptions. Such exemptions broadly include: (a) imports of machinery and equipment either for the main industries such as phosphate, cement, potasch; and Jordanian air lines, or for the industrial sector in general to meet the provisions of the Encouragement of Investment Law. (b) Import of

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6. It should be noted that each group represents an aggregate of products from the corresponding BTN chapters, and on the other hand the values of the average nominal duty represent the basic charged i.e. regular tariff, plus other surcharges before exemptions.

Table (5.1) Average Rates of Import Duties by Product Group, 1975 and 1979

Product Group[a]	1975			1979		
	Imports c.i.f.	Nominal Duty[b]	Average Rate of Duty % of imports	Imports c.i.f.	Nominal Duty[b]	ARD %
(1) Agricultural Products, n.e.s.	25.956	2.878	11.1	44.930	4.697	10.5
(2) Fruits, nuts, coffee, tea & spices	8.575	2.484	29.0	14.791	4.024	27.2
(3) Prepared foodstuffs	15.974	3.301	20.7	24.169	5.180	21.4
(4) Beverages & Tobacco	1.260	1.426	113.2	5.044	5.901	117.0
(5) Mineral Products (including fuels)	25.497	2.005	7.9	92.307	9.008	9.7
(6) Chemicals & Allied Products	11.604	2.309	19.9	25.310	4.527	17.9
(7) Rubber, leather, wood, paper & synthetic products	14.511	3.599	24.8	46.868	11.368	24.3
(8) Textiles & Textile articles	19.499	7.978	40.9	24.981	14.715	43.1
(9) Footwear, headgear & related products	1.164	0.951	81.7	2.909	1.450	50.0
(10) Articles of stone, glass, or material goods	23.131	5.067	21.9	10.705	2.938	27.4
(11) Household appliances & furniture	5.138	2.340	45.5	13.030	6.356	48.7
(12) Machinery, Equipment & Tools	33.341	6.778	20.3	76.859	17.373	22.6
(13) Railway equipment, Aircraft & ships	12.147	0.729	6.0	8.977	0.539	6.0
(14) Precision Instruments	3.219	0.684	21.2	9.404	2.439	25.9
(15) Other manufacturing goods	1.091	0.389	35.6	1.143	0.379	33.2
(16) Passenger motor vehicles	8.417	7.234	86.0	n.a.	n.a.	n.a.
(17) Motor vehicles for transport	11.470	6.013	52.4	n.a.	n.a.	n.a.

Source : (i) Ministry of Finance. Customs Tariff. Amman, 1980.
(ii) Department of Statistics. Foreign Trade Statistics, Amman, 1979
(iii) I.M.F. "Fiscal Survey of Jordan" an unpublished report, 1977.

Notes : (a) Each group represents an aggregate of products from the corresponding BTN chapters.
(b) Basic charges (tariff) plus other surcharges, before exemptions.

Government departments and the military establishment. (c) Imports of scientific, religous and charitable institutions as well as those of the diplomatic corps. (d) Equipment and agricultural machinery. (e) Imports of the Civil and Military consumer Associations.

Jordan's tariff system was primarily based on specific duty rates during the 1950's. This was compatible with the administrative machinery and the level of economic development in general at the time. Specific rates were preferred mainly for their ease of application and to avoid the valuation problem, not to mention the fact that evading the tax by understating the value of imports was less likely. However, by the early sixties with the country entering a new era of economic development and planning and particularly with the introduction of the 1962 tariff schedule, the limitations of the specific duties were recognized. On the one hand, the range of imports diversified both in character and prices. Specific duty discriminated against cheaper brands of imports by applying the same rates irrespective of the price of the goods involved and in turn this may not be compatible with the equity criteria and made the tariff system more regressive. On the other hand, the revenue of import duties did not take into account the change in prices and this makes the revenue inelastic, i.e. no matter how the price changes the revenue is not affected. This fact was even more recognised in periods of inflationary pressures in the early seventies.

The above reasons led to the dominance of Ad valorem duties in 1962 tariff rates. However, specific rates were retained for certain items such as tea, cereals, beverages, tobacco and some petroleum products. Moreover, in the case of motor vehicles specific duties were retained in combination with ad valorem duties, i.e. a certain amount per weight plus an ad valorem percentage of the value of the vehicle related to its engine capacity and model. However, more recently the government

recognized the complexity of motor vehicle taxation and the whole system was changed by retaining the ad valorem duty with some modifications.

2. Other Supplements to Customs Tariff

On top of the regular tariff, Jordan, like some other developing countries apply other supplementary surcharges on imports. These surcharges represent a substantial percentage of the value of imports and very often imposed without exemption. On top of these surcharges are the so called Unified Additional Taxes on imports introduced by Law No. 25 of 1966 and Regulation No. 80 of 1966. Essentially these are ad valorem supplements to the tariff dually providing substantial revenues. Perhaps the reason behind the imposition of such surcharges in their separate character is politically motivated rather than economical or logical reasons. This is because originally these surcharges were earmarked for certain interests and projects to which little opposition from the public could be expected in contrast to that if they were added directly to the tariff rates. However, lately the earmarking has been gradually waived out and the revenue geared directly to the government budget. These surcharges represent a total of 11% of the value of imports subject to tariff according to Regulation No. 82 of 1979, and constitute the following:

5.5% Additional Unified Fees

0.5% Social Services Tax.

5.0% Credited to other Departments as follows:

- 2.0% For Municipalities
- 2.5% For The University of Jordan
- 0.5% For Hussien Sports City.

Apart from the above, Law No. 28 of 1969 imposed an additional tax on imports, namely,

a 2.0% of the value of imports (c.i.f.) exempted from Customs tariff.

1.0% of the value of imports (c.i.f.) subject to Customs tariff.

However, a number of imported commodities are subject to differential taxes instead of the above 3.0%. Such goods include (a) a 20.0% of the value of tariff on alcoholic drinks, (b) a specific surcharge of 800 fils/ton of cement; 500 and 250 fils per tyre of large and small motor vehicles respectively, and (c) 10% of the value of tariff on a range of 19 products such as tobacco, and household appliances[7].

Over and above, the law also imposes an import licence fee of 4.0% of the value of all imports in accordance with import Regulation No. 78 of 1976, excluding a number of items, particularly those imported by Government Departments[8]. This fee is payable when the import order is placed and was originally intended as a protection measure and an instrument of balance of payments policy.

5.1.1.2 Revenue Significance of Import Duties

Import duties represent the single most important item in the Jordanian tax system. In absolute terms, revenues maintained an ever rising trend over the period under consideration. Between 1955 and 1966, revenue increased from about JD 4.0 million to JD 10.1 million, however, their share in total indirect taxes has been declining over time. For example, while they represent 83% of indirect taxes in 1955 this rate dropped to 59% in 1967. As of 1967, however, import duty revenues picked up again both in absolute as well as relative terms and reached an unprecedented figure of JD 86 million in 1979, or about 73% of total indirect taxes, Table (5.2). When total domestic revenues are considered, import duties still formed over 40% on average, and during the last four years i.e. 1976-1979 that ratio even reached over 50%. Their ratio to

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7. For more details see Ministry of Finance/Customs. Customs Tariff Schedule. (Amman : Nov. 1980).

8. A list of the exempted imports and institutions is to be found in Regulation No. 76 of 1976, Official Gazette, No. 2654, 1976.

GDP in turn followed the same trend declining steadily before 1967 to reach a low of 5.5%, yet during the period 1967-1979 their share in GDP increased gradually to form about 13% in 1979.

The nominal rates of growth of import duties during the period 1955-1960 was 8.5%, dropped to 7.3% during 1961-1967. However for that of 1968-1973 the duties grew by 10.5% on average. The last period however, i.e. 1974-79 marked an unprecedented rate of growth of about 35%. This significant rate of growth was perhaps due to two main reasons. On the one hand, that period marked the launching of two development plans during which both public and private expenditures reached a peak, and of course this expenditure increase was reflected in similar large scale increase in imports be it consumer goods or capital and intermediate goods. On the other hand, this large rate of growth disguised the inflationary period which accompanied the expansion of the economic activity during the same period.

Due to the importance of revenues from import duties as a share in domestic revenue, the government has always been concerned about the stability of its revenues particularly relevant to its bid to increase the level of domestic revenues both in absolute terms as well as a share in total revenues. Customs revenues have been affected by three main factors, namely, the choice of the level of the base for imposing the tax, i.e. the level of protection, the changing structure of imports, and the level of exemptions.

So far as the first factor is concerned, as was indicated earlier the main basis for imposing the tax has been relying mainly on ad valorem basis, and this is desirable mainly because it reflects, among other things, the adjustment of the revenue automatically in line with the ever changing international prices which are in turn reflected in an increasing import bill. However, the government had to have an eye on those items which are subject to specific tax, particularly imports related

Table (5.2) Relative Importance of Import Duties, 1955 - 1979

Year	Import Duties in JD million	Percent of Indirect Taxes	Percent of Domestic Revenue	Percent of total Revenue	Percent of GDP
1955	3.969	83.0		16.9	7.7
1956	3.986	81.5	45.9	15.5	8.9
1957	4.743	81.3	24.7	15.4	7.1
1958	4.493	67.1	39.8	14.8	6.6
1959	5.770	68.7	43.4	16.1	7.6
1960	6.225	67.0	44.8	16.8	6.6
1961	6.007	60.3	40.9	15.5	6.1
1962	6.777	61.9	32.1	15.3	5.6
1963	8.179	66.9	42.3	19.5	6.8
1964	9.192	66.2	38.6	17.8	7.1
1965	11.842	65.7	44.4	23.4	7.9
1966	10.115	64.8	44.0	24.9	6.0
1967	9.533	59.2	37.4	13.5	5.5
1968	10.969	63.5	41.6	15.2	8.3
1979	12.397	59.8	38.2	16.2	7.9
1970	11.696	62.7	38.9	17.1	6.3
1971	10.253	51.2	28.8	13.0	5.5
1972	12.841	53.4	30.3	13.5	6.1
1973	16.401	54.8	35.6	15.9	7.5
1974	21.833	58.7	33.5	15.7	8.8
1975	28.060	58.1	34.1	14.1	10.0
1976	52.470	68.2	50.0	27.5	14.3
1977	78.192	76.6	55.9	24.4	16.3
1978	81.385	75.5	49.7	26.1	14.3
1979	86.440	72.6	47.5	19.7	12.6

Source : See Relevant Tables in the Appendix

to alcoholic drinks and tobacco, not only to keep up the level of revenues generated from such items but also to maintain a protective umbrella for local industry. Although such policy may yield the desired revenues yet in certain instances, particularly in the area of tobacco products, the level of protection seems to be high enough to invite a relatively large scale smuggling as will be discussed later in this chapter. By and large, it could be maintained that in relying on ad valorem form as a floor for customs revenues the government seems to have managed to keep the level of revenues increasing in absolute terms, coupled of course with the frequent increases in the specific tax on other imports.

On the other hand, the pace that the revenues from customs duties has taken over the past two decades or more seem to have been dependent to a considerable extent on the magnitude of taxable imports, prices and income elasticity of demand for imports. During the 1950's consumer goods imports represented around 80% of total imports and as such provided an ample base for a growing customs revenue. However, as of the early sixties the share of consumer goods imports in total imports started a steady decline. For example, while it was about 76% in 1955-56 it dropped to 51% in 1968, Table (5.3). This was perhaps a resultant factor of the development phase in which Jordan started in the mid-sixties in launching two development programmes, therefore increasing imports of capital and intermediate goods relative to consumer goods. And given the fact that the largest part of customs duties is generated from imports of consumer goods, then it is reasonable to suggest that although the increase in total imports led to growing import duties in nominal terms, however caused a drop in the relative share of customs duties in total domestic revenues. This picture was further given support in the latter period 1969-1979 in which a strong relationship between the share of imports of consumer goods and that of customs duties took place,

Table (5.3) Total Imports Classified by Final Use, 1950-1975

(in Millions of JD's)

	Consumer Goods		Capital Goods		Intermediate Goods		Total
	value	%	value	%	value	%	
1950	8.4	78	0.4	4	2.0	18	10.8
1951	12.5	80	0.5	3	2.7	17	15.7
1952	13.0	75	1.2	7	3.1	18	17.3
1955	20.6	76	2.5	10	3.9	14	27.1
1956	21.2	76	2.9	11	3.7	13	27.8
1958	24.7	73	4.2	12	5.1	15	34.0
1959	25.2	63	4.5	11	10.3	26	40.0
1961	27.5	66	4.4	10	9.4	24	41.9
1962	27.9	61	5.0	11	12.7	28	45.6
1963	32.9	65	3.1	6	14.9	29	50.9
1964	34.8	65	4.2	8	14.6	27	53.6
1965	34.6	62	3.9	7	17.6	31	56.1
1966	42.2	62	5.7	8	20.3	30	68.2
1967	29.6	54	5.4	9	20.0	36	55.0
1968	29.4	51	4.8	8	23.3	41	57.5
1969	36.6	54	7.5	11	33.6	35	67.7
1970	36.2	55	5.4	8	24.3	36	65.9
1971	44.4	58	10.9	15	21.3	26	76.6
1972	60.8	63	10.2	11	24.3	25	95.3
1973	85.3	78	5.9	5	17.5	16	108.7
1974	97.7	62	23.3	15	35.4	22	156.4
1975	135.0	67	23.0	11	45.0	22	203.0

Source : (i) Department of Statistics, Flow of Goods in The Jordanian Economy, Amman (April 1970)

(ii) National Planning Council, The Five Year Development Plan, 1976-1980.

(iii) Department of Statistics, Unpublished data.

in the sense that the revival of consumer imports resulted in similar steady increase in customs duties.

However, during the last decade the government was able to increase its revenue from customs duties by imposing a wide range of additional taxes to supplement the former. This is evident if one looks at the relative importance of import licencing revenues and that of the additional tax, both of which represent over 18% of the total import duties in 1979 or about JD 15 million.

Nevertheless, although such efforts may result in an increase in the level of revenues in the short run, yet the overriding objective should be the creation of an income elastic duty system that provides an automatic increase in the revenues from import duties in the long run. Taking into consideration the present drive for import substitution[9], the revenue from customs duties is bound to take a declining course due to the erosion in the base of the tax, basically consumer goods imports as well as the sizable exemptions for purposes of investment promotion. It is therefore rather obvious that a new course of policy for the medium and long-term future development might be needed, if greater revenues as well as a progressive distribution of the tax burden of indirect taxes are to be achieved. This objective could possibly be achieved through facing the problem dually on two main fronts, that is, keeping up the current level of customs duties by reducing to the greatest extent possible the unnecessary exemptions on the one hand, and a policy of greater reliance on other internal indirect taxes to substitute the erosion of customs duties over time on the other hand.

5.1.1.3 Protection, Regulation and Resource Allocation

If the ratio of customs duties revenues to total imports is taken to

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9. The government is embarking on an ambitious industrialization programme within the framework of the new Five Year Development Plan for the period 1981-1985.

represent the overall average level of tariff , then one would conclude that the general level of tariffs in Jordan is low compared to many LDCs[10]. However, the overall average tariffs level may not accurately represent the level of protection in Jordan for two main reasons: First, during the late fifties and mid-sixties Jordan placed a greater emphasis on imports quantitative restrictions than that on tariff. This emphasis was mainly based on classifying goods into four main categories, namely in (a) those which competed with locally produced goods; (b) goods which are not competitive with domestic production, for which no domestic production exists; (c) complementary products, that is, goods of which there was local production, however, not enough to satisfy domestic needs, and (d) raw materials and capital goods. The level of quantitive restrictions was therefore related to the domestic needs of the economy with the above classification the base for distinction. This implies in effect that no overall policy was perceived but rather ad hoc decision making pertaining to the immediate needs of the economy. Secondly, since the industrial sector was not yet sufficiently developed only a relatively small fraction of imports were competitive with domestically produced goods, as explained before, duties on which determine the level of tariff production. During the 1960's, particularly with the launching of the Five Year and Seven Year Development Programmes, the degree of protection granted to the industrial sector tended to increase. Still however, the emergence of a relatively strong protectionist tendency was based on import classifications and hence quantitative restriction rather than tariff were the basis of policy using to that end bureaucratic regulations by either prohibiting the importation of certain commodities, limiting other goods importation to certain countries; and subjecting others to the system of import

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10 M. Mazur, "Economic Growth and Development in Jordan, op.cit. p.222.

licencing. After 1967 and the resultant pressures on government revenues, tariff rates were increased for revenue purposes, however this did not result in increased protection because excises and other domestic taxes were simultaneously increased for the same reason, i.e. revenue raising purposes.

By 1972, the government authorities started voicing their dissatisfaction with the resultant effect of the protection policy. In fact, the governments preoccupation with the development of the industrial sector has led to gearing its protective policy, which was frequently coupled with internal price regulations as well as monopoly control of the market resulted in creating internal frictions and resource misallocation among the productive sectors in the economy. It is not surprizing in fact to see that the agricultural sector has been declining over time in terms of its overall contribution to GDP as well as the level of employment it provides. Not only government policy resulted in more and more capital and human resources being geared to the industrial sector, but in view of its internal regulatory policy which accompanied the industrial protection led to a wide range of inefficiency in the industrial sector on the one hand, and made new investments in the agricultural sector reluctant. As alluded to earlier, this situation was recognized by 1973 and was clearly stated in the Plans preamble which stated that "Prices of some locally manufactured products are higher than those of similar imported ones because some of the existing domestic industries have enjoyed excessive protection advantages and privileges. Hence, these industries have ignored the need for improving the quality of their products or even reducing production costs; Moreover, failure to adopt clearly defined principles and regulations governing licensing, protection and exemptions, ..., have all encouraged the prevalence of inadequacies"[11].

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11. National Planning Council. The Three Year Development Plan, 1973-1975, p.112.

As a consequence of the recognition of the resultant resource allocation effects, Jordan's protective policy moved in the mid 1970's towards lower reliance on import restrictions and more reliance on tariffs. As we already mentioned earlier, the 1976 tariff measures reduced tariff rates on imports competitive with local industries including textiles, footwear, paints and liquid batteries.

Such a liberalization attitude towards protection is certainly welcomed. In order to lessen the impact on resource allocation, it may seem reasonable to suggest that duties on machinery and equipment be reduced from the current average rate of 23%. On the other hand, duties on motor vehicles used for transportation could follow suit. It is apparent that duties on consumer goods are highest amongst others, attention should be given to this area in order not to attract a more than proportional investment in consumer industries. This may have a long-term effect on the composition of the industrial sector itself as well as on the economy at large. A coordination and harmonization policy between customs duties, and excise and other indirect taxes is likely to be a must if more distortions are to be avoided.

5.1.2 Taxes on Exports

5.1.2.1. General Arguments for Export Taxes

In view of the need for raising adequate revenues to finance economic development, coupled with the fact that their economies are not yet prepared for more sophisticated methods of resource redirection through income and broadly based taxes, many developing countries resorted to imposing export taxes.

The most outstanding reason for the imposition of export taxes is simple expediency, however, several arguments based on ability-to-pay and revenue productiveness could be advanced. Moreover, obvious administrative simplicity as well as flexibility and widespread political desirability

are points in hand.

Unlike several indirect taxes, export taxes are politically favoured because they appear to have little direct effect on the population, a factor which is certainly important in developing countries. However, the effectiveness of such taxes as a source of revenue is dependent to a large extent on both the volume and nature of exports. Therefore, they tend to fluctuate in a similar fashion to that of the exports themselves. In that sense, the history of export taxes is one of discontinuous growth. Their upsurge tend to coincide with export booms, their decline and disuse correspond with trade contraction[12]. On the other hand, primary products and particularly agricultural products tend to fluctuate more than mineral products for example, depending both on local demand as well as weather conditions.

Notwithstanding the motivations and needs underlying the imposition of an export tax, it is alleged that the tax may inhibit the growth of the export sector as well as interfering in resource allocation. In developing countries embarking upon industrialization programmes with the aim of solving their balance of payments problems, mobilizing the export sector is a necessity. It would seem rather important then to keep export taxes at a very low level particularly in the early stages of development in order to lessen the possible restrictive effect of the tax on the growth of exports. Some countries even go further in providing subsidies for the export orientated industries to make them more competitive in foreign markets.

It is argued however, that an export tax would stimulate output particularly in countries relying mainly on agricultural exports. This is because, it is contended, that farmers would have to work harder to achieve their income aspiration. Good and others[13], argued in that

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12. See J.V. Levin, The Export Economics, 1960, p.263

13. Richard Good, et al., "Role of Export Taxes in Developing Countries". I.M.F. Staff Papers, vol. 14 (Nov. 1966) pp.453-501.

respect that these possibilities cannot be dismissed, but a growing body of experience, statistical studies, and expert opinion indicates that in most areas the price elasticity of supply of primary products is positive and not negligible.

Unlike many other developing countries, Jordan has practically no significant export taxes, apart from an export tax on phosphates, ceramic tiles and cement products with a very minor export fee. The main reasons underlying the governments abstention from imposing tax on exports could be referred to (a) the high concentration of exports in a small range of primary products, and (b) it was only relatively recently that import substituting industries began to emerge, consequently such firms need an "infancy" period, during which they concentrate on the home market. This may lead to an easy transition into export markets[14]. This warrants a brief examination of the composition of Jordan's exports.

5.1.2.2. Export Composition

As was already mentioned, Jordan relies on few exports concentrated in mining and agricultural products. Table (5.4) shows the contribution of the main groups of exports to the export total. The figures indicate that despite the overall rate of growth of total exports, they are still concentrated in mining and agricultural products. It was however, only in the last four to five years that other manufactured goods started to account for a significant share of total exports. Up to 1975, exports of mining (mainly phosphates) and agricultural products accounted for more than three quarters of total exports, while exports of manufactured goods made up around 20% of the total. During the early seventies it is

14. For a discussion of the impact of export concentration see N.G. Khalaf, "Country Size and Trade Concentration", Journal of Development Studies, vol.11, No.1, 1974, see also D.B. Keesing, "Outward-Looking Policies and Economic Development", The Economic Journal, vol. 77, No. 306, 1967

obvious that mining exports share had risen to more than 50% of total exports, at the same time manufacturing exports increased considerably.

Furthermore, the relatively high degree of commodity concentration in Jordan's exports was accompanied by a relatively high degree of geographical concentration[15]. The situation led, at least partially, to instability in Jordan's exports either in fluctuating prices or that of the volume of exports. It is worth mentioning here that in times of low agricultural production the governments agencies, particularly the Ministry of Supply, steps in the market with regulatory measures either price controls or banning exports altogether of the much needed items. In opening the borders of exporting agricultural products, the government intends to allow the farmers to make some profits to alleviate the pressures on internal markets. On that basis it would seem out of the question to impose export taxes on agricultural products due to domestic economic conditions. Moreover, even if the government imposes such a tax, the same conditions would make such meagre revenues unstable and, in fact, undesirable. By and large, perhaps the important thing that one can derive from the above discussion is the fact that the nature of concentration in Jordan's exports conditions made the introduction of any significant export tax hard and thus could be the underlying factor behind the lack of initiative on the part of the government. It seems therefore, if such taxes are to be thought of then it would only be in the area of manufacturing exports. This course of action would not be consistant with the general development strategy of promoting outward looking policies to cater for balance of payment problems. In general, the government has been concentrating in the last decade, and certainly in the new Five Year Plan 1981-1985, on promoting import-substitution and exports, therefore any policy contradicting this direction would not be

15. Ziad M.Fariz, "The Role of Foreign Trade in the Economic Development of Jordan", op.cit., p.59.

Table (5.4) Composition of Jordan's Exports by Group of Products, 1960-1979 (in million of JD)

Year	Mining		Agriculture		Manufactured Food		Other Manufacturing		Total	
	value	%	value	%	value	%	value	%	value	%
1960	1.346	38.6	1.736	52.1	0.193	5.5	0.206	5.9	3.481	100.0
1961	1.660	39.0	2.109	49.6	0.237	5.6	0.246	5.8	4.252	100.0
1962	1.568	31.8	2.769	56.2	0.320	6.5	0.272	5.5	4.929	100.0
1963	1.537	27.8	2.778	41.3	0.580	10.7	0.618	11.2	5.522	100.0
1964	2.470	35.2	3.125	44.6	0.395	5.6	1.022	14.6	7.012	100.0
1965	2.547	32.9	3.771	48.6	0.452	5.8	0.982	12.7	7.752	100.0
1966	3.258	37.2	3.991	45.6	0.483	5.5	1.026	11.7	8.759	100.0
1967	3.512	35.0	4.368	43.7	0.557	5.6	1.547	15.7	9.984	100.0
1968	4.258	35.1	5.262	43.0	0.589	4.8	2.063	17.1	12.122	100.0
1969	4.108	34.5	5.134	43.1	0.755	6.3	1.910	16.1	11.907	100.0
1970	2.580	27.6	4.352	46.6	0.436	4.9	1.952	20.9	9.320	100.0
1971	2.733	30.9	3.240	36.8	0.799	9.1	2.045	23.2	8.817	100.0
1972	5.443	43.2	4.330	35.0	0.533	4.2	2.297	18.2	12.606	100.0
1973	5.496	26.0	4.508	32.2	0.266	1.8	3.340	23.0	14.010	100.0
1974	23.775	60.2	9.015	22.0	1.115	2.8	5.532	14.0	39.433	100.0
1975	21.453	53.3	9.609	23.0	0.959	2.3	8.054	20.0	40.075	100.0
1976	20.078	40.5	16.379	33.1	-	-	13.095	26.4	49.552	100.0
1977	18.880	31.3	20.643	34.3	-	-	20.730	34.4	60.253	100.0
1978	20.691	32.3	16.336	25.5	-	-	27.102	42.2	64.129	100.0
1979	27.557	33.4	21.239	25.7	-	-	33.760	40.9	82.556	100.0

Source : (i) Department of Statistics, Flow of Imports in the Jordanian Economy, 1958-1968, (Amman : Dept of Statistics Press, 1970)

(ii) Department of Statistics, unpublished data

(iii) Central Bank of Jordan, Monthly Statitical Bulletin, vol. 16, No. 12, December, 1980

welcomed. On that background, below, the main export tax on phosphate and other levies are presented.

5.1.2.3. Export Duties

Jordan levies an export tax on phosphate rock exports which only recently was extended to cover Mosaic and Cement products. In addition two minor export fees are charged.

(1) The Phosphate Export Tax

The phosphate rock industry is considered one of Jordan's key industries in terms of production, employment and foreign exchange earnings. In 1976 for example, it provided employment for 2866 persons, and the ratio of its exports to the country's total exports reached 38.8%, as well as constituting about 5% of GDP[16].

Inspired by the need to raise additional revenues, the government imposed in 1974 on exported raw phosphate a specific tax of JD 6 per metric ton. Over the period 1962-1972, the Jordanian selling price of phosphate was ranging from JD 3.75-4.06. However, the 1974 boom of world prices resulted in escalating the Jordanian selling price to JD 13.9 per metric ton. This upsurge in prices coupled with a continuous increase in production and sales has led to windfall gains to the company, an opportunity which the government spared no time to capture by raising the tax on exports in January 1975 from JD 6 to JD 11 per ton. This increase in the tax rate provided the government with ample funds amounting to JD 6.91 and JD 11.02 million in 1974 and 1975 respectively, in addition to the company's income tax of JD 2.12 and JD 0.73 million during the same two years[17].

16. Central Bank of Jordan, Monthly Statistical Bulletin, vol. 17 No. 2, Feb. 1981.

17. For relevant data see Ministry of Finance, Annual Reports, 1974-1979; see also Zuhair Khalifeh, op.cit., Table V1.23, p.200.

However, the revenue bonanza resulting mainly from the price hike did not last long. The underlying factors could possibly be two main reasons; On the one hand the price of phosphate in the international market is not a stable one because the demand is linked to the agricultural production cycle as well as general world economic conditions. Changes in the world market did not take long to have the price hike subsided and dropped to about JD 9.0. On the other hand, the rise in the unit-cost of processing was increasing considerably to reach about JD 7.0 by 1975[18]. These changes put the company in a difficult financial position, and therefore was not able to meet its 1975 and 1976 tax obligations.

In view of the above, it is recognised that such an export tax creates price, output and revenue effects according to the elasticity of supply and demand of phosphate. Such a specific export tax on Jordan's exports seems to be inappropriate. First, as was argued earlier, this form of tax rate does not take into consideration the changes in prices, hence leading to an instability in government revenues. Furthermore, Jordan's exports are nothing but a small fraction of the world demand. In fact Jordan is a price taker in the world phosphate market not capable of influencing world prices.

It is therefore rather obvious, that given this position in the world market the imposition of such a specific tax rate will not eventually lead to a high foreign exchange. The reduction in foreign exchange earnings will be greater as the world demand became more and more price elastic; at the same time government's revenue will be reduced unless supply is completely inelastic. Moreover, since Jordan faces an extremely strong competition in the supply of phosphate in the world market, government revenue from this tax is likely to be

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18. By 1975 the unit-cost of processing was 50% higher than that of the Morrocan phosphate which is considered the main competitor to the Jordanian phosphates in the world markets.

reduced each time the tax is raised, not only in terms of the export tax revenue itself but also due to the fact that the company cannot afford losing its market, if it does, the consequent drop in its profitability would adversely affect the governments' revenue from both returns on its shares as well as company profit tax[19], not to mention the loss of foreign exchange earnings of the company.

Given the fact that the main characteristics of tax revenue from exports is the variability of revenues and the destabilization of domestic income, Lewis[20] advocated stabilizing export incomes by varying tax rates in the same direction as export prices. Taking into consideration that Jordan's phosphate exports faces, in general, an elastic foreign demand and inelastic domestic supply, it seem then that it would be more reasonable in order to stabilize government revenue and ensuring better conditions for a profitable industry, that the specific export tax should be replaced by an ad valorem one with varying tax rates. Such a change will take into account the nature of the market, allowing for price and demand changes and contributing to a stable source of government revenue.

(2) Other Export Taxes

In addition to the phosphate tax, it was only recently that the government has imposed an export tax on some manufactured exports such as marble, tiles and mosaic and cement bricks. The tax was introduced by Regulation No. 62 of 1976, again a specific one levied as follows:

(1) An 800 fils/square meter of marble

(2) 400 fils/square meter of ceramic tiles, and

(3) A 5 fils/kg of cement bricks

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19. It is worth noting here that the government owns 89% of the Jordan Phosphate Company's shares with the rest owned by private shareholders.

20. W.A. Lewis, The Theory of Economic Growth, 1955, p.291

However, given the fact that exports of these materials are still in the very early stage, the impact of the tax either in terms of revenues, which is still negligible, or other economic effects are yet to be seen. In addition to the above two export taxes proper, Jordan imposes general supplementary fees these include:

(a) Export Inspection fees: This is a levy imposed on the value of exports in an ad valorem form of 1% according to article 9 of the Customs and Excise Law. However, the list of exemptions which include among other things for example, re-exports of foreign goods and all the countries agricultural, animal and industrial products makes it negligible at best, and,

(b) Unified export tax of 1% of those exports subject to the previous inspection fees.

These two fees are, as said before, negligible and the wide range of exemptions negates even their existence.

5.2 Jordan's Excise Taxation

Traditionally excise taxes are imposed on domestically produced goods. As industrial development begins, it is natural to start with import-substituting industries and therefore producing commodities that previously were subject to custom duties and yielded considerable sums of revenue. It is therefore not surprizing to see that revenue consideration in developing countries are almost always in the forefront of the argument for excise taxation. Selective excise taxes, if properly designed, may be used for revenue raising purposes particularly to compensate the lost revenue due to import substitution. Chelliah[21] suggested in this respect that this could be achieved if excises are confined to commodities that satisfy at least one or more of the following characteristics:

(1) Low price elasticity of demand

(2) High income elasticity of demand

(3) Goods absorbing scarce factors needed in the public sector, and

(4) Luxuries consumed by the well-to-do.

Accordingly, for the revenue raising objective the tax would provide ample revenues if imposed on widely consumed goods with such characteristics.

On the other hand, excise taxes could achieve a sumptuary objective, that is to say, they can be used to limit consumption of commodities which may be considered undesirable for one reason or another. Achieving this, it could be argued, may as well redirect resources from consumption spending into savings and hence provide more resources for the much needed investments. In Jordan, as may well be the case in most developing countries, the rationalization of both private and public consumption

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21. R.J. Chelliah, "Taxation of Consumption Expenditure with Special Reference to India", In R. Bird and O.Oldman, (eds) Readings on Taxation in Underdeveloped Countries. (Baltimore: The John Hopkins Press, 1967).

has been over the years one of the major objectives sought after in the successive development plans.

However, unless excise taxation is properly designed and implemented it may have a detrimental effect on resource allocation and hence an adverse effect on economic development. This is because instead of limiting consumption of certain products, excises may lead to undesired substitution effects, consumers shift consumption to cheaper alternatives. Moreover, it is also conceivable that a similar shift of resources from producing goods to the services sector may occur, particularly where services are not properly taxed, a shift which is very often not desired especially in an economy characterized by a structural imbalance towards the services sector such as that of Jordan's, as was alluded to in chapter one.

The tax is generally administratively feasible, particularly where the system is limited to a few items, and since the tax is generally imposed on mass consumed goods it is elastic in terms of revenues, i.e. a small increase in rates yields relatively large sums of revenues with low administrative cost.

In spite of the obviously desired characteristics, the tax may not satisfy the equity criteria. For one, being imposed on goods with mass consumption it does not differentiate between the poor and the well-to-do, therefore its burden on the poor is likely to be significant. It may be incompatible with the ability to pay of the people.

5.2.1 Excisable Goods and Nature of the Tax

Perhaps the most important objectives of the excise taxes are two, namely revenues and equity, the fulfilment of both of which depends to a large extent on a number of characteristics related to the economy itself. More often than not, the two objectives are not compatible

therefore a choice has to be made for either of them. For example, if the tax is to be imposed on luxuries a price increase may lead to a contraction in demand hence negatively affecting the revenue aspect of the tax, however, the tax is at the same time fulfilling the equity objective because its burden is more properly distributed and relatively affecting the well-to-do more than the poor. On the other hand, if the tax is being imposed on items of widespread use, while maintaining revenues, it nevertheless violates the usual standards of equity. It is clear therefore, that a successful excise tax is conditioned by the consumption pattern of commodities suitable for excise taxation that provide in general a more acceptable distribution of the tax burden.

Moreover, the nature of production as well as the distributional channels is bound to affect the imposition and implementation of the tax. For example, the more the production is concentrated in medium or large scale industries easily identifiable the more successful the tax. By contrast, the more intensive is the small scale artisans and retail producers and sellers the less feasible the tax may be and perhaps the cost of administration, even if the administration capacity is available, would be far more than the collection of the tax itself.

The goods that are almost always the main candidates for excise taxation in most countries are virtually the same, i.e. tobacco, alcoholic and petroleum products. These are the earliest commodities ideal for taxation for many reasons matching the above conditions. On the one hand, use is almost always widespread and their demand is price inelastic. Except for petroleum, their consumption does not contribute to economic development and they are socially considered undesirable. Particularly in countries such as Jordan because of religious reasons alcoholic consumption is morally objectionable. Generally, there are few major producers which make it administratively easier to administer. On the one hand, once a refining industry is established, motor fuel or petroleum products in general comes

into the net of taxation. The motives for its taxation are two-fold. Firstly, there is the revenue aspect in terms of not only raising new revenues but also compensating for the loss of a major source of customs duties. Secondly, and perhaps as important, it depends on the benefit principle of taxation with the equity criteria in mind. Taxation of motor fuel is justified on equity grounds for charging the users of the road system. The provisions of expenditures for roads are considered a commercial activity hence charging road users is justified on the benefits they derive from the road system.

Concern is not only given to the nature and justification of potential candidates for excise taxation, but also to the nature of the tax itself. Excise tax in the vast majority of countries are specific in nature per unit of production, which is often the souce of criticism. Due suggests that "specific rates are the source of some complaint, particularly over their discrimination against cheaper brands of the commodities such as cigarettes, which has distorted resource allocation by lessening relative use. At the same time, since the cheaper brands are used primarily by the lower income groups, the taxes are more regressive than otherwise. The purchaser pays no more tax on the most expensive whisky than on the cheapest; thus the relative after-tax price differential is lower"[22]. In addition, the tax does not take into consideration price changes particularly in an inflation era.

5.2.2 Tax Rates and Related Levies in Jordan.

Jordan is not distinctive from other countries in terms of the excisable goods or the nature of the tax. Table (5.5) provides a list of the commodities subject to excise and related levies and the tax rates applicable. The first excise law was passed in 1928 and was applied to alcoholic products followed in 1929 by the inclusion of

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22. J.F. Due, op.cit. p.61.

Table (5.5) Jordan's Excisable Goods and Duties Rates Levied, 1979 (Value figures in fils)

Product	Excise Duties 1	Unified Tax 2	Additional Tax 3	Other 4	Total Levies 5
A. Tobacco Products					
Tobacco	1.272/kg				1.272/kg
Cigarettes	-	20/20 Cig.[a]	5/20 Cig.[b]	5/20 Cig.[c]	30/20 Cig.
Tombac	480/kg	-	5/30gr. (packs)	-	6.5/30gr.
Snuff	1.440/kg				1.440/kg
Cigarette paper	0.5/ 1000 leaves	5/1000 leaves			5.5/1000 leaves
Matches	100/gross				
B. Alcoholic Products					
Araq (100/15)	100/1t	145%[d]	10%[e]		255/1t
Cognac (100/15)	125/1t	145%[d]	10%[e]		319/1t
Wine	50/1t	145%[d]	10%[e]		128/1t
Beer	40/1t	140%[d]	10%[e]		100/1t
Pure alcohol (100/15)	75/1t	45%[d]	10%[e]		116/1t
Mixed alcohol	32/1t	45%[d]	10%[e]		50/1t
Other liquors (100/15)	175/1t	120%[d]	10%[e]		403/1t
Denatural alcohols (100/15)	10/1t	45%[d]	10%[e]		16/1t
C. Petroleum Products					
Benzine	5.5/1t	-	-	4/1t.[f,g]	9.5/1t
Kerosine	-	-	-	1/1t.[f]	1/1t
Avitech	7/1t	-	-	1/1t.[f]	8/1t
Avitor	4.6/1t	-	-	1/1t.[f]	5.6/1t
White spirit	7/1t	-	-	1/1t.[f]	8/1t
Propan gaz	8/kg	-	-	1/kg.[f]	9/kg
Mineral Oil	70/kg	-	-	-	70/kg
Solar	1.5/1t	-	-	-	1.5/1t
D. Cement	7200/ton		800/ton		8000/ton

(cont.)

Table (5.5) continued.

	Product	Excise Duties 1	Unified Tax 2	Additional Tax 3	Other 4	Total Levies 5
E.	Soap					
	Toilet	2/100 gr.	-	-	-	2/100 gr.
	Other	20000/ton	-	-	-	20000/ton
F.	Toothpaste, Shaving cream					
	Tube	10/70 gr.	-	-	-	10/70 gr.
	Other	15/tube	-	-	-	15/tube
G.	Detergents (net)	70000/ton	-	-	-	70000/ton
H.	Vegetable Oil	10/kg	-	-	-	10/kg
I.	Cast Iron	5000/ton	-	-	-	5000/ton
J.	Liquid batteries[h]	various	-	-	-	-

Source : Information supplied by the Customs and Excise Department Law No. 28 and No. 64 of 1969; Law No. 59 of 1976.

Notes :

(a) Excluding the brand name Lulu

(b) Excluding the brand names Lulu and Sport

(c) Excluding the brand names Kamal. This is called an encouragement tax proceeds of which are earmarked to subsidize tobacco growers; 10 fils per pack of 20 is levied on Lulu, Kamal and Samar cigarettes.

(d) Unified tax is taken as a percentage of the excise duty of the respective item.

(e) 10% of excise duty on each item

(f) Earmarked for municipalities

(g) 2 fils/lt earmarked for villages

(h) The tax on liquid batteries is collected in accordance with the Domestic Production Fees System No. 47 of 1971. This takes into account the type of the batteries.

tobacco products. The rates were very small for example, Cognac excise tax was then 10 fils/lt; pure alcohol 50 fils/lt, and mixed alcohol 10 fils/lt. While that on cigarettes was 500 fils/kg; tobacco 250 fils/kg and tombac 250 fils/kg. Two more products were introduced in 1950, namely, salt and matches, but were and still are negligible in terms of revenues. However, by 1960 the Jordan Refinery Co. was established and naturally petroleum products were automatically subjected to excise tax by Law No. 36 of 1960. Since than a very few products were added to the excise list including, cast iron; liquid batteries; cement; vegetable oil and detergents. Furthermore, woollen textiles and paints were added to the list in 1971, however, by 1976 both excises which contributed very little to revenues were withdrawn, so was the old duty on salt.

Clearly, Jordan's excise system is limited in coverage. The most important items in the excise list are tobacco; petroleum products; and cement. Alcoholic products are not important due to religious reasons that prevail in most Moslem countries which in effect restrict its consumption. The rates applicable to each commodity are given in Table (5.5). It is clear that as is the case in custom duties, the basic excise tax is supplemented by the unified and additional tax mainly on tobacco products and alcohols, as well as other taxes on petroleum products earmarked for municipalities and villages. The implications and significance of the tax rates are discussed below mainly concerning cigarettes and petroleum products which are by far the most important of all.

5.2.3 The Growth of the Tax

Although limited in coverage as was already indicated, Jordan's excise system is relatively productive of revenues. Up to 1960, excise revenues were relatively small and contributed less than 5 percent to

total indirect taxes. However, the introduction of Petroleum products, vegetable oil and liquid pattaries led to sudden increase in total excises to 13.4 percent of indirect taxes. As table 5.6 shows, revenues from excises increased in absolute terms from JD 1.5 million in 1960 to JD 6.0 million in 1970 and continued a rising trend to reach a record high of JD 17.8 million in 1979, a 15 per cent of total indirect taxes. On the other hand, their share in total domestic revenues have been increasing as well to reach its highest of about 22 percent in 1973, however this rising trend subsided since then and stood at 10 percent of d omestic revenues by 1979.

Clearly the revenue importance of excises is positively correlated with the number of commodities subject to the tax, their volume of consumption and to a large extent the tax rate. The number of excisable goods depends in turn on the level of development in general and the growth of the industrial sector in particular. The more the domestically produced goods, the more potential available for increasing the excise revenues.

However, the revenue objective is not the only one to be taken into account in subjecting new products to the tax net although it is the most important. Several other characteristics should be considered, some of which are already alluded to. There is the equity objective and demand and supply elasticities of the product on the one hand, and widespread usage of the product and the economic effects of the tax on the other hand. All such factors are to be taken into consideration in expanding the excise system alongside the revenue objective as it is discussed further in this section.

The commodities subject to the tax number about 30 items which fall into 10 major categories as shown in Table 5.7. Three major products contributes over 90 percent of the total excise revenues, namely,

Table (5.6) Relative Importance of the Excise Revenues 1955-1979

(values in million JD's).

Year	Excise Duty Revenues	Per cent of Indirect Taxes	Per cent of Domestic Revenues	Per cent of of GDP
1955	0.267	5.6	3.3	0.6
1958	0.326	4.9	2.9	0.4
1960	0.424	4.6	3.9	0.4
1962	1.474	13.4	7.0	0.4
1964	3.206	23.1	13.5	2.2
1965	4.027	22.4	15.1	2.4
1966	4.842	31.0	21.1	2.8
1967	4.774	29.7	18.7	3.6
1968	4.909	28.4	18.6	3.1
1969	6.471	31.3	19.8	3.5
1970	6.009	32.3	20.0	3.4
1971	7.327	36.6	20.6	3.9
1972	9.263	38.5	21.8	4.5
1973	10.117	33.8	21.9	4.6
1974	10.991	29.6	16.9	4.4
1975	12.733	26.4	15.5	4.6
1976	12.018	15.6	12.1	3.3
1977	12.534	12.3	9.0	2.6
1978	14.492	13.4	8.8	2.5
1979	17.760	14.9	10.0	2.6

Source : Table (5.5), and Appendix Tables (12), (13).

Cigarettes and Tobacco products, Petroleum products and Cement. Here we'll take them in turn in some detail.

5.2.3.1. Cigarettes and Tobacco Products

Up to 1960 when the petroleum refinery was established tobacco products which include (cigarettes, tobacco, snuff, tombac) were the main source of excise taxes in Jordan accounting for more than 90 per cent of total excises. Tobacco was subject to a specific tax and the statute according to which the tax was imposed dates back to the 1929 law of producing and selling tobacco products. Since then several changes took place mainly concerned with regulatory aspects of the industry. By 1963, a new Law No.51 of 1963 was passed in which the rates of the tax were increased on

Cigarettes, from 500 fils/kg to 700 fils/kg
Tobacco, " 250 fils/kg to 500 fils/kg
Tombac, " 250 fils/kg to 400 fils/kg, and
Snuff, " 150 fils/kg to 200 fils/kg.

These increases in the tax rate were reflected in an increase in tax revenues which suddenly increased in 1964 to JD 964 thousand to JD 1.7 million in 1965, Table 5.7. However, by 1969 with the rising need for an increase in revenues, the tax rates were increased again and by 1976 stood at the rates prescribed in Table 5.6.

The specific nature of the excise tax on tobacco is the source of some complaint, particularly over its discrimination against the cheaper brands of cigarettes and therefore resulting in an unequal distribution of the tax burden among consumers. On the other hand, and perhaps more important that the former is the fact that the tax is insensitive as to the changes in the product price. This has resulted in keeping the revenue elasticity of the tax below unity especially during the seventies during which the prices of cigarettes have increased considerably while the ratio

of the tax to the sales price of cigarettes deteriorated, and the relative after-tax price differential is low. Due noticed that some countries, particularly when the variation in the quality is significant, have set up several rate classes, the rate varying according to the selling price[23]. Taking into consideration that currently the sale price of different brands of cigarettes in Jordan ranges between 90-180 fils per pack of 20, then it seems more feasible to follow the above example adopted by other developing countries, hence solving the undesirable feature of the specific tax. This could possibly be achieved by differentiating between three brands according to their sale price, say for example, 90-125; 145-150; and 180 and over. Then by using a constructive unit to which the tax applies say 25%, 35% and 50% of retail price of each class of cigarettes. Once the retail prices change by a certain percentage point then the relevant tax rate would change accordingly.

This ad valorem tax rate, if considered, solves the undesirable feature of the specific tax. At the same time it will ensure a revenue stability of the tax revenue on cigarettes. This is very important if one takes into consideration the relative importance of tobacco excise to total excise revenues which contributed about JD 7.9 million in 1979, or about 45% of total excises, a revenue source which has to be maintained and stabilized as well.

Smuggling of foreign-made cigarettes into the country is a serious problem which need to be tackled more rigorously. Higher import duties than those to be found in neighbouring countries particularly Saudi Arabia and Kuwait are alleged to have increased smuggling despite the efforts of Customs and Excise personnel. Currently, import duties on cigarettes is 3982 fils/kg or about 80 fils per pack of 20 cigarettes. Therefore it is perhaps feasible to re-examine this import-duty rate in order to

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23. Ibid, p.71

Table (5.7) Revenue of Excises by Product, 1965-1979

(in million of JD's)

Year	Tobacco & Tob Products		Cement		Petroleum products		Alcoholic products		Cast Iron		Detergents & Retail Products		Vegetable Oil		Liquid Batteries		Salt & other		Total Excise Duties	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%		
1965	1.704	42.3	–	–	2.036	50.6	0.196	4.9	–	–	0.033	0.8	0.032	0.08	0.015	0.4	0.011	0.2	4.027	100.0
1966	1.905	39.3	–	–	2.645	54.6	0.192	4.0	–	–	0.039	0.8	0.035	0.8	0.018	0.4	0.010	0.1	4.842	100.0
1967	1.966	41.2	–	–	2.571	53.9	0.158	3.3	–	–	0.037	0.8	0.012	0.3	0.017	0.4	0.013	0.1	4.774	100.0
1968	1.826	37.2	0.203	4.1	2.580	52.6	0.171	3.5	0.042	0.9	0.036	0.7	0.022	0.4	0.020	0.4	0.009	0.2	4.909	100.0
1969	1.965	30.4	1.135	17.5	3.003	46.4	0.182	2.8	0.105	1.6			0.048	0.7	0.022	0.3	0.011	0.2	6.471	100.0
1970	1.660	27.6	1.000	16.6	2.993	49.8	0.144	2.4	0.100	1.7	0.037	0.6	0.042	0.7	0.023	0.4	0.010	0.2	6.009	100.0
1971	1.769	24.1	1.353	18.5	3.806	51.9	0.203	2.8	0.076	1.0	0.061	0.8	0.024	0.4	0.024	0.4	0.011	0.1	7.327	100.0
1972	2.399	25.9	1.751	18.9	4.599	49.7	0.250	2.7	0.111	1.2	0.093	1.0	0.024	0.3	0.023	0.3	0.013	0.1	9.263	100.0
1973	2.807	27.7	1.947	19.2	4.797	47.4	0.251	2.5	0.152	1.5	0.110	1.1	0.001	–	0.030	0.3	0.022	0.2	10.117	100.0
1974	2.897	26.4	1.925	17.5	5.545	50.5	0.278	2.5	0.101	0.9	0.151	1.4	0.032	0.3	0.035	0.3	0.027	0.2	10.991	100.0
1975	2.809	22.1	2.484	19.5	6.584	51.7	0.335	2.6	0.198	1.6	0.187	1.5	0.065	0.5	0.049	0.3	0.012	0.1	12.733	100.0
1976	3.582	29.8	3.101	25.8	4.256	35.8	0.409	3.4	0.294	2.4	0.248	2.0	0.067	0.5	0.061	0.5	–	–	12.018	100.0
1977	4.997	39.9	3.551	28.3	2.839	22.7	0.394	3.1	0.319	2.5	0.321	2.6	0.058	0.4	0.055	0.3	–	–	12.534	100.0
1978	6.049	41.7	3.779	26.1	3.451	23.8	0.447	3.1	0.323	2.2	0.333	2.3	0.067	0.5	0.043	0.3	–	–	14.492	100.0
1979	7.925	44.6	4.588	25.8	3.855	21.7	0.382	2.7	0.382	2.2	0.386	2.2	0.112	0.6	0.041	0.2	–	–	17.760	100.0

Source : Ministry of Finance, Department of Customs and Excise, Unpublished Data.

lessen the incentive to smuggle along with more rigorous checking and penalties to wholesalers and retailers selling smuggled brands.

5.2.3.2. Excise on Motor Fuel and Other Petroleum Products

Automotive taxation aim at achieving a number of objectives. Firstly, achieving allocative efficiency in the use of the road system is considered a major objective. If such an objective is to be realized, then the road user charge has to approximate the marginal social costs imposed by each type of vehicle, which involve primarily road repair and maintenance[24]. Secondly, automotive taxation has a distributional goal to achieve, that is increasing the progressivity of the tax system, since the use of passenger cars is mainly a privilege enjoyed by the middle and upper income classes and therefore reflects an ability-to-pay the tax. Moreover, revenues generated could further the distributional effect also through allowing additional funds for the much needed social and economic projects which benefit the less privileged segment of the society. Thirdly, motor fuel taxation and excise on other products as well, could achieve an economic objective through restricting consumption and therefore saving a considerable sum of foreign exchange, an objective which assumes particular importance in non-oil producing developing countries with meagre resources such as Jordan. In general, achieving these objectives necessitate having three tools of taxing motorists, i.e. motor fuel taxation; registration and licencing; and import duties. Jordan applies all measures, here we briefly focus on the first, the rest however are considered later in this chapter.

Excise and other levies on petroleum products in Jordan are given in Table 5.6.

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24. For a useful overview see, Charles E. Mclure, JR "Automotive Tax Reform", in R.A. Musgrave and Malcolm Gillis (eds), Final Report and staff papers of the Colombian Commission on Tax Reform (Harvard Law School, 1970, pp. 692-718.

Until the end of 1979, Benzine (Gasoline) was then taxed at 9.5 fils per litre and the pump price of the regular brand was 105 fils per litre, therefore the tax to sale price ratio was about 9.1%. No studies have been made on road user costs in Jordan, hence equating the tax the marginal cost is not possible[25]. Alternatively, a comparative study shows that on average the excise on regular gasoline in non-oil producing developing countries is 43% of the sale price[26]. Even in the major oil producing countries, the excise included in the retail price on average is still 29%, compared to Jordan's 9.5%.

It is worth stressing at this juncture that following the oil price boom in the mid-seventies, petroleum products pricing has been one of the most delicate and politically sensitive issues in Jordan. The successive governments reacted by keeping the prices very low which amounted to subsidising petroleum prices. Having this in mind, the above comparisons indicates that Jordan's taxes were then well below those of other developing countries as well as developed countries.

More recently the enormous increase in the country's oil-bill which for example was about 12% of total imports, and 53% as a ratio to domestic exports in 1979 which even has risen to 16% and 95% respectively in 1980[27], put severe pressures on the government to stop the subsidization policy and to drastically increase domestic prices. Accordingly, the prices increased considerably. For example, the sale price of regular brand of benzine was raised to 155 fils per litre. This policy of price increases was coupled with an unprecedented policy action of waiving away most of the excise duties on petroleum products which appear in column (1) of

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25. An IBRD mission estimated road user costs in Central America, however the study was carried out in the late sixties and certainly costs have increased considerably since then. For details see IBRD, "A study of Road User Charges in Central America", Paper No.15, particularly pp.63-65 and 72-82.

26. See Katrine W. Saito, "Petroleum Taxes: How High and Why?" Finance & Dev., vol. 12, Dec. 1975, p.20.

27. Central Bank of Jordan, Monthly Statistical Bulletin, vol. 17, May 1981.

Table 5.6, keeping only 70 fils/kg on mineral oil and 1 fils/kg of propane Gaz[28]. On the other hand, in order to have an equitable system, the government kept the prices of other petroleum products which are used mainly by low income groups relatively low such as Kerosine and diesel which are used for heating purposes and were very lightly taxed now standing at only 1 fils per litre. The practically no tax on diesel was also meant as providing an incentive to industries to keep their costs at a reasonably low level.

On the whole, the government policy as explained by the structure of petroleum products taxation seems to be concentrating on distributional aspects of the tax burden and lessening governments' subsidy rather than raising revenues. In fact the new measures are bound to have the revenues raised through taxing petroleum products cut drastically. And sooner rather than later the government would find it difficult not to increase prices further as well as having to find other ways of raising the revenue lost in its late measures.

5.2.3.3. Other Excises

Apart from excise tax on cigarettes and petroleum products, the main excise tax is that on cement. Revenues from the three excises made up over 92% of the total excise revenues. The tax on cement of JD 8.0 per ton is relatively high. If we take into consideration the domestic sale price, it makes over 27% of the sale price per ton[29]. This tax to price ratio decreased relatively from 32% as a result of the recent price increase. Proponants of such a high tax rate argue that it is meant to be as an indirect tax on luxury housing, or at least it is justified

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28. Government of Jordan, "System No. 18 of 1980", Issues 16.2.80

29. Up to the end of 1979 the sale price per ton was about JD 25. As of February 21, 1980, the government increased the price per ton to JD 28.80. See Jordan Cement Company Ltd, Annual Report No. 28, 1980.

on that basis. There is little, if any, logical basis for such a proposition. If the government wishes to tax luxury housing, there are certainly other means to do so. Specifically, the proper application of the urban land and building tax is of particular importance, especially so if frequent evaluation and strict implementation of the tax are seriously considered which in turn would introduce some acceptable level of progression in the tax system. However, from the revenue point of view, the tax is understandably revenue productive and contributed, for example, about 26% of the total excise revenue in 1979.

Alcoholic excise tax on the other hand, contributed less than 3% of total excise revenue because of religious restrictions on consumption in Jordan. The rest of the excisable commodities, namely, cast iron, detergents, vegetable oil and liquid patteries together contribute about 5%.

5.2.4. The Expansion of the Excise System

In view of our analysis above, it is apparent that the issue of expanding the excise system is bound to arise sooner rather than later. Any consideration for such an expansion must take into account several factors, each of which has its own bearing on the economy, not to mention the fact that some of these factors may prove to be contradictory rather than complementary. In such a situation priorities have to be decided on in favour of achieving a particular aim through a particular fulfilment of certain factors. Such factors may include economic, equity and administrative features.

As far as the economic factors are concerned, it is rather obvious that as the government pursue its import-substituting policy, which is I believe entering its main thrust through the launching of the current Five Year Development Plan 1981-1985, then customs revenues will be lost on a growing range of products far beyond cigarettes, petroleum products,

cement and alcoholic drinks. Therefore, two issues would emerge. Firstly, that government has to face up to its pledge of increasing the share of domestic revenues, therefore new needs for increasing revenues are arising. Secondly, taxation policy would require them to take into consideration lessening any resource misallocation which may arise from import-substitution policy, in the sense that investments are needed to be distributed reasonably in order not to create any unintended internal frictions in the economy. Here the use of excise taxation in coordination with custom duties could prove to be of considerable importance.

Equity criteria on the other hand, requires that the expansion of the excise system should ensure a fair distribution of the tax burden among the population by introducing an acceptable degree of progression to the tax, hence affecting in essence the well-to-do relatively more than the poor. Thus an important factor arises in the choice of new products to be introduced to the excise system.

Administrative capability is a factor not to be ignored. This is mainly because an expanded excise system if not carefully designed may create its own weaknesses, particularly because of the growing complexity either concerning the range of products or the number of producers in the field.

Taking the above into consideration, a sudden expansion of the excise system to cover all new established industries is neither conceived nor even feasible. For Due[30], there are a number of factors determining the coverage of the excise system. These factors could be summarized in the following:

1. The nature of domestic production, especially the range of commodities affected by import substitution. The smaller the number, the more feasible is the use of excise taxes.

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30. John F. Due, Indirect Taxation in Developing Countries. (London: The John Hopkins Press, 1970), pp. 71-77.

2. The nature of the production and distribution structure, particularly the importance of small-scale artisans and retail shops. The more extensive the small-scale production, the greater the advantage of utilizing a few excises instead of a sales tax.

3. The extent to which commodities suitable for excises are consumed in patterns that provide an acceptable distribution of tax.

4. The capacity of the administrative structure to deal with the larger number of firms encountered under a sales tax.

5. The urgency of the need for revenue, given other tax sources and requirement for economic development, and,

6. The dangers of unwanted import-substitution. This criterion, perhaps the most significant, is the one commonly neglected in planning tax policy.

These factors have their implications towards the economic, equity and administrative criterion discussed earlier. Accordingly, it seems imperative to suggest that any expansion of the excise system that takes into account the above factors have to be gradual and more importantly selective in nature. It should be recognized however, that it might be difficult to meet all the above criteria collectively, hence in the case of conflicting criteria compromises have to take place based on the priorities set forth by the authorities. For example, suppose administrative feasibility conflicts with, say, revenue aspects, then it is conceivable that a relative loss of revenue may be allowed to be forgone to yield to administrative ease and low costs of collection.

In general terms, a gradual expansion of the excise system takes into consideration two principal forms in deciding the new commodities, that is, (a) luxury consumption goods, which may be considered as a good measure of taxpaying ability, and (b) Items of widespread use,

a factor necessary to maintain a relatively high revenue yield without incurring high costs.

In view of our discussion above, there are a number of products which meet the criterion set forth and therefore could be considered as potential candidates to be included in the tax system. These products are meant to be illustrative rather than conclusive, however they were chosen simply because they possess all the necessary qualities that meets the above criteria. Briefly these are:

(1) Textiles : There is one major company, The Jordan Woollen and Textile Co. Ltd, which was established in 1962. Throughout the government provided the company with effective protection either through high tariffs on similar products or leaving the company to enjoy a monopolistic grip on the market with no price controls. In addition the company was among the earliest ones to benefit from the provisions of the Encouragement of Investment Laws in exempting its imports of machinery and raw materials from custom duties and charges. Production has been increasing exceedingly fast which increased from 753 thousand yards in 1975 to 1180 thousand yards in 1979[31]. Certainly after being twenty years in the market the justification for its early protection, which is still in force, is loosing ground simply because it is not an "infant industry" any more. It is well in mind that a tax on textiles was earlier imposed and later waived because, as it was formally declared, lack of revenues. However, in the last five years conditions have changed and apart from anything else, production and sales proved this change, which warrants retaining the tax. The tax rate could be set in a specific nature, i.e., say 200 fils per yard. Based on the 1979 production level this would provide the government with at least JD 236,000. However, for reasons described earlier, it is preferable

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31. Industrial Development Bank. Annual Report, 1980

that the tax rate be set in an ad valorem form as a percentage of the market price per yard of material and be graduated according to the quality of production.

(2) Soft Drinks. A new excise which should as well be considered with potentially higher revenue yields than many of the products already subject to excise tax, is on soft drinks. This is a mass consumed commodity, hence, could provide a reliable and stable source of revenue. It is alleged that the tax may have an adverse effect on consumption thereby would provide lesser revenues over time. This is because this commodity is price elastic. In spite of the fact that this may be argued for any other commodity, it nevertheless could be reasonably argued that considering the very low prices currently prevailing[32], it appears less likely that the consumption would be affected significantly. Moreover, it could rightly be argued that the tax would be relatively regressive, however, on balance this disadvantage would be outweighed by its revenue effect. The tax could be expressed in ad valorem terms, say, 30% of the market price per bottle of 65 cl.

(3) Leather and related products. The Jordan Tanning Co. Ltd is the only producer which was established in 1957 with government participartion. The company enjoyed, not only the utilization of public funds, but also full protection from imports of similar products as well as giving it monopolistic market in Jordan. Production has been considerable over the past ten years. For example, production of sole leather and wool increased from 47 tons in 1975 to 179 tons in 1979, while that of upper leather increased from 1719 thousand feet to 2029 thousand feet between the two years[33]. To avoid violating equity criteria the tax could be set according to the quality of the products with higher rate on fine qualities and lesser tax rates on others potentially consumed by

32. The market price of a 65 cl bottle is standing at 30 fils/bottle.
33. Jordan Tanning Co. Ltd., Annual Report, 1979

lower income classes.

As was said earlier, these are potential candidates for excise tax, however they are by no means the only potential excisable goods. Plastic and undergarment industries should be considered, however it is acknowledged that their taxation poses an administrative challenge because of the widespread number of small producers and hence the cost of collecting the tax could be a handicap. Toilet paper and related products could also be considered. Until recently the only factory in Jordan was heavily protected and has had a monopoly on the market, however it was only relatively recently that another manufacturer was licenced and started production. The products are widely used and an ad valorem tax related to the market price of relevant products could provide reasonable revenues.

5.3. Other Taxes on Services and Transactions (Fees and Licences).

Jordan levies a wide range of indirect taxes on services provided by government departments and agencies. Using the Ministry of Finance terminology, these taxes come under the heading of "Fees and Licences". In this section, a number of these taxes were selected for discussion for two main reasons : On the one hand, they represent over 70% of this source of revenues; and secondly, they are a clear form of taxation aspects of which need to be discussed, such as the land and building sales tax and the vehicle registration and licencing taxes. Others will be briefly alluded to with an evaluation of their revenue significance in relation to the tax system.

5.3.1. The Land and Building Sales Tax

Although considered a registration fee on land and building transfer, it is in fact a capital tax applied in the absence of a proper capital gains tax. The tax applies to land and buildings upon their sale or transfer. The tax was first introduced by Law No. 50 of 1953 which was

subject to a number of amendments, most recently by Law No. 21 of 1974. Most of these amendments were nothing more than adjusting the tax rates.

The tax is better enforced than that of the urban land and building tax, due mainly to the fact that any transaction of sale, transfer, exchange or inheritance of land and buildings are not legally valid unless registered with the Land Registration Department. As far as its revenues are concerned, it is the most revenue productive tax among the whole fees and licences. Its revenues increased considerably from only JD 270 thousand in 1968 to about JD 8.0 million in 1979, or about 37% of the total revenues of fees and licences, Table 5.9. The rates of the tax has been increased from 3% in 1970 which was levied on the buyer only to 10% at present, of which 6% payable by the buyer and 4% by the seller (Law No. 21, 1974 and its 1976 amendment).

Apparently, the rate of the tax is relatively high. Notwithstanding, the fact that the tax is self-enforcing as a result of the registration procedure, yet there is a great deal of delinquency in paying the tax. This is mainly due to the problem of under reporting of the property value given the absence of a capital gains tax. This may explain the underlying reasons behind the high tax rate in order to make up for the erosion of the tax base.

The sales between branches of a family or between husband and wife are exempt, as well as property transfers of corporations and cooperatives, factors which contribute to the erosion of the tax base. If the tax in its present form is to be more revenue productive, both exemptions could be eliminated. The tax base could be broadened to include transfers between relatives, however differential rates could then be applied in relation to the consequinity. This, in effect, would imply an introduction of elements of death duty, arguments about which were advanced in chapter four. However, whether a death duty in a formal manner is to be introduced or not, the present proposal seems to be reasonable in order

widen the tax base on the one hand, and lessening the possibilities of evading the tax on the other. Moreover, the second exemption of transfers between housing corporations and cooperatives are not justified and certainly a loophole that should be done away with.

It remains to be argued however, that if the argument for a capital gains tax (Chapter four) is to be accepted and consequently a tax to be imposed, then it would be rather obvious that the present tax would have to be reconsidered. This would involve either abolishing the tax altogether or augmenting it in the wider capital gains tax. If such a situation arises, it could be a rather sensitive one for the government for two reasons: Firstly, the present tax is the second most import one in terms of revenues apart from import licencing and contributed about JD 8.0 million in 1979, over 46% of the total revenues of the whole gamut of fees and licencing. Hence, the government would be hesitant to loose such an ample source of revenue. Secondly, this could be viewed at the same time with the possibility that a newly introduced capital gains tax may not be as revenue productive in the short-run, either due to administrative problems; tax evasion; valuation problems or a combination of them. Having this in mind, it would seem reasonable then to have the present tax phased away gradually be augmenting it in the wider capital gains tax which would reassure the authorities of a degree of revenue stability. This could perhaps be done by lowering the tax rate significantly taking into consideration the rates of the proposed capital gains tax.

5.3.2 Automobile Registration and Licencing

In conjunction with motor fuel taxation, Jordan applies a second tier of taxing motorists through the application of registration and annual licencing fees. As Table (5.8) shows, Jordan distinguishes between benzine and solar powered vehicles based on the fact that the later provides longer distances per gallon. This distinction is in fact irrelevant

in the case of passenger cars. because not only are there very few vehicles in the country but also their importation is banned. However, its importance stems from its imposition on all vehicles other than passenger cars.

There are two kinds of fees applied. Firstly, there is a registration tax levied upon the vehicles once and for all payable when the car is first registered and, secondly, there is an annual licence fee. The former is a graduated one based on engine capacity starting at JD 100 for passenger vehicles with an engine capacity of less than 1 litre to JD 500 for those with an engine capacity of more than 3 litres. This structure of the tax, which is relatively high, is meant to have the tax borne primarily by the upper income class and reflect the ability-to-pay, therefore contributing to the overall progressivity of the tax system. Although the tax is overall progressive, however two points should be made. First, such a uniform tax for all automobiles have some disadvantages, the most obvious is that it is regressive within the car-owning group because it does not take into account the age of the car. Second, using engine capacity as a taxable base does not reflect the true value of the car. Therefore, the most obvious way to achieve equitable taxation would be through changing the taxable base from engine capacity to an ad valorem rate graduated by car value[34]. If an ad valorem tax of this form is to be used, then the officials responsible for collecting the tax would have to be provided with tables of standard values to be used in valuing cars of a given age, make and model. This may not, as it appears, introduce any significant administrative complications simply because the importation of cars over 5 years of age was banned recently. Alternatively however, a compromise on administrative

34. A similar scheme was recommended for application in Colombia, See R.A. Musgrave & Malcolm Gillis (ed.), Fiscal Reform for Colombia: Final Report and staff papers of The Colombian Commission of Tax Reform, 1970 (Harvard Law School, International Tax Program), especially Chap. 15 p.692

Table (5.8) Motor Vehicle Taxation, 1979

(value in JD's)

Type of Vehicle	Annual Licences[a]			Registration		Import Duties	
	Taxable base	Benzine	Solar	Benzine	Solar	Taxable base	Duty (% of value)
(1) Passenger cars	Engine capacity					Engine capacity & year model	
	1 lt or less	13	40	100	300	(1) Less than 2 lt	
	1-2 lt.	18	54	150	-	1st year - 5th year	80%,60%,50%,40%,30%
	2-3 lt.	27	81	300	-	(2) 2-3 lt	
	exc. 3 lt.	36	10	500	-	1st year - 5th year	120%,100%,90%,80%,70%
						(3) exc. 3 lt.	
						1st year - 5th year	160%,140%,130%,120%,110%
(2) Taxis and Buses	Seating capacity						
	5 passengers	5	30	100	-	weight	50 fils/kg
	6 "	8	48	100	-		
	7-8 "	10	60	100			
	9-25 "	20	60	-	-		
	exc. 25 passengers	20 + ½ JD per p.	60 + 1.5 per p.	-	-		
(3) Trucks & Trailers	Tonnage						
	> 1 ton	9	27	150-200	50	weight	400-600 fils/kg
	1-2 tons	12	40	100	50		
	2-3 tons	18	54	-	400-800[b]		
	exc. 3 tons	18+1.5 JD/t	54+4.5 JD/t	-			
	Trucks without trailers	18	54		-		
	Trailers	2.5	2.5				
(4) Tractors & Lift Trucks	Tractors					exempt	
	Trailers: less than 5 tons	-	3			Trailers -	28%
	exc. 5 tons	-	6				
Tractor Mechanical shovels							
(5) Motorcycles	Single	1	-		5	value	23%
	with sidecar	1 .5			-		

Source : (i) Gov. of Jordan, Land Transport System No. 24 of 1971 and its amendements.

(ii) Gov. of Jordan, Ministry of Finance/Customs. Tariff Schedule, 1980

Notes : (a) In addition, there are JD 1.5 for a driving licence; JD 0.5 for motorcycle driving licence; and JD 200 for taxis registration number plates plus JD for issuing number plates.

(b) JD 400 for trailers not exceeding 12 tons; and JD 800 for those exceeding 22 tons.

grounds would be to differentiate the tax on both the age of the car and its weight which is a better proxy than that of engine capacity.

The same rationale could be applicable to the annual licence fee, which is currently graduated according to engine capacity in the passenger cars categories with a 1:3 ratio between benzine and solar powered cars; and according to seating capacity for other cars and buses. By and large, the tax is revenue productive and contributed about JD 2.0 million in 1979 and has been growing steadily since the early seventies. It is worth noting here that the progressivity of motor vehicle taxation is enhanced with the newly introduced system of import duties, which increases from 30% of the cars value of 5 year old to 80% on that of the same year model for cars of engine capacity less than two litres; for those between 2-3 litres it increases from 70%-120%; and for cars over 3 litres the tax graduated from 110%-160%.

5.3.3. Other Fees and Licences

The above discussed taxes are the most important, however the rest are either imposed for revenue raising purposes or paying for government services.

(a) Revenue stamps are becoming a significant revenue source to the government contributing JD 2.662 million in 1979. They were first introduced by law of Revenue stamps of 1952, some of them ad valorem and others specific. Examining the whole gamut of revenue stamps, it seems to me that a number of them are strong candidates for abolition on the grounds of their business obstructing nuisance aspects or their obsoleteness. Those revenue stamps specifically are:

1. Stamp tax on contracts and agreements to enter into contracts.
2. Stamp tax on petitions and written proceedings to government agencies.
3. Stamp tax on documentary evidence.
4. Stamp tax on drafts, bills of dept, bills of lading and bills of sale.

5. Stamp tax on cheques of public corporations and agencies. Their abolition will result in some loss of revenues, however this could be more than met by considering a tax on hotel guests which is to be discussed shortly.

(b) In addition there is a wide range of taxes on services such as passport fees which have recently been examined and increased significantly along with reducing the period of passport validity from 5 to 3 years, a move which certainly resulted in a considerable increase of revenues. Court fees need to be examined in some detail.

By and large, the above were selective fees and licences which to me needed to be looked at in some detail and made up collectively the major source of revenues. However, two points need to be made here in connection with "fees and licences" or in fact excises on services : First, there seems to be some unnecessary complications in the system as well as overlapping in certain areas whereby a quite different tax is being levied on the same transaction or service; such as the stamp duties, additional tax and unified tax being levied separately. The unification of these levies could result in an ease of application; less administrative cost and better understanding on the part of the public. Secondly, a new tax which ought to be considered is one on hotel guests, a tax which would fall on foreign tourists, business men and well-to-do local residents. Considering the large increase in hotel capacity, which in fact was doubled during the past three years, the tax would be highly revenue productive and would fully make up the revenue loss of revenue stamps.

5.3.4. Revenue Significance of Taxes on Services

Taxes on services or fees and licences revenues have been steadily increasing particularly over the past ten years. Tables (5.9) and (5.10) provides data on the sources of revenues as well as their relative

Table (5.9) Sources of Revenues from Fees and Licences, 1968-1979

(in thousands of JD's)

Year	Land & Building Sales Tax	Revenue Stamps	Vehicle Registration & Driving Licences	Passport Fees	Counsellor Fees	Civil Aviation	Transport	TV Licences	Court Fees	Hospital and Vet fees	Training & Exams	Company Registration	Birth & Death Certificates	Miscellaneous	Total
1968	270	396	193	119	83	65	228	-	165	168	50	12	16	261	2026
1969	381	319	243	203	106	79	253	-	168	220	57	8	17	33	2192
1970	299	328	336	266	113	89	252	-	147	210	47	9	18	20	2134
1971	463	389	346	513	189	126	330	14	181	233	63	8	22	68	3073
1972	914	420	453	593	112	74	378	148	206	235	72	12	20	53	3688
1973	1738	598	1033	651	294	76	528	187	245	185	89	8	23	81	5731
1974	1612	577	1634	886	355	73	623	182	294	201	100	268	27	73	6590
1975	3385	798	1288	1026	454	149	657	216	392	228	139	1003	29	95	9759
1976	5759	960	1986	1261	826	190	746	404	469	298	105	269	35	98	15831
1977	3332	1323	3658	1383	524	180	1545	380	540	360	138	464	40	124	13991
1978	4941	2122	2018	1636	87	276	1511	369	639	401	122	106	126	199	14553
1979	7927	2662	1961	2498	1251	979	1415	818	793	260	98	102	150	374	21288

Source : Ministry of Finance, Annual Reports, various Issues

Table (5.10) Revenue Significance of Total Fees and Licenses, 1968-1979.

(Value in million JD's)

Year	Revenues of fees and Licenses		As % of Indirect Taxes	As % of Domestic Revenues	As % of GDP
	Abs	Rate of Growth			
1968	2.03	-	11.8	7.7	1.3
1969	2.19	8.3	10.8	6.9	1.2
1970	2.13	-2.7	11.2	7.0	1.2
1971	2.07	44.1	15.0	8.6	1.1
1972	3.69	20.2	14.9	8.6	1.5
1973	5.73	55.3	19.0	12.5	1.7
1974	6.59	15.0	17.0	10.4	2.3
1975	9.76	48.1	20.0	11.8	3.5
1976	15.83	59.2	20.4	14.7	4.3
1977	13.99	-11.6	13.4	9.8	2.9
1978	14.55	4.0	13.5	9.3	2.6
1979	21.29	46.3	17.9	11.8	3.1

Source : Table (5.5) and Relevant Tables in the Appendix

importance to other sources and GDP. The data shows that revenues from this source increased from only JD 2.03 million in 1968 to over JD 21 million by 1979, an average rate of growth of about 24% over that period. In fact it was only since the mid seventies when the government started looking at fees and licences potential as a major source of revenues.

For example, changes in various charges resulted in a sudden increase in revenues by over 55% between 1972 and 1976, and since then their share in total indirect taxes increased to over 20% by 1976, however, dropped slightly to 18% by 1979 not as a result of a decrease in their absolute terms but rather due to a factor growth in other sources such as import duties and excise taxes. Similarly, their share in total domestic revenues increased significantly to about 12% by 1979, and maintained an average of 10% of domestic revenues over the period 1968-1979. Although they still make only about 3.1% of GDP however, the diversity of the charges and the width of their base make them a major potential as a source of revenues.

If one looks at their components, it is apparent that land and building sales tax; Revenue stamps and vehicle and passport taxation makes the main contributions to the overall revenues of fees and licences with, in fact, the first two sources making about 50% of their revenues. Civil aviation fees are expected to rise considerably once the new international airport is opened next year, other sources however need to be looked at in detail and specific recommendations for improvement identified, particularly so, I believe, courts and hospital fees are candidates for exploration and modification.

5.4. The Elasticities of Indirect Taxes

In this section the calculations of the elasticities of indirect taxes are presented. The tax elasticity to GDP; the tax to its base and the base to GDP of the main taxes were calculated. Analysis of

this sort, it is believed, may permit the identification of the main factors affecting the magnitude of the elasticity coefficient. For example, the tax to base elasticity may show that part of the revenue growth within the control of the authorities. The elasticity of the base to GDP shows the growth of the tax base which is largely conditioned by the structure of the economy, and in a sense outside the government's control. Certainly, both effects should be taken into account in designing taxes that are to be income elastic.

Similar to that of direct taxes, no tax rate changes could be taken into consideration for lack of necessary information. Elimination of tax rate changes concerning excise duties for example, necessitate the availability of data about the flow of each type of commodity and its different varieties as well as the changes and timing of tax rates for each specific product.

However, following Lewis[35] excise taxes were disaggregated to commodity level and their tax to base elasticity was computed. This exercise would allow us to see the tax to base elasticity and relate it to the overall excise elasticity.

Empirical Results

(1) Overall Indirect Taxes Elasticity to GDP

Indirect taxes included all taxes discussed in the chapter namely, custom duties, excise duties, fees and licences. Data was used for the period 1960-1979 and both a double-log and a linear form were used. The former fitted the data better and the results are given in equation (1):

35. S.R. Lewis, Jr., "Revenue Implications of Changing Industrial Structure : An Empirical Study", National Tax Journal, vol. 20 No. 4, Dec. 1967.

$$\text{Log ID} = -4.71 + 1.49 \log \text{GDP} \qquad (1)$$
$$(25.05)$$
$$R^2 = 0.97 \quad DW = 1.66 \quad DF = 18$$

where, ID = Indirect taxes revenues

GDP = Gross domestic product of factor cost.

Figures in parenthesis represent t-value.

Apparently the elasticity coefficient is well above unity at 1.49. The high R^2 of 0.97 reflect a strong correlation between indirect taxes and GDP and the related Durbin-Watson statistic though well below 2 mark yet indicate no auto-correlation problem exists. The disaggregation of indirect taxes to their major components may give an indication to the main contributor to the above elasticity coefficient.

(2) The Elasticity of Import Duties

Import duties elasticities were calculated with respect to GDP; to their base and the elasticity of base to GDP. The results are given respectively as follows:

$$\text{Log MD} = -5.65 + 1.58 \log Y \qquad (2)$$
$$(22.65)$$
$$R^2 = 0.96 \quad DW = 1.85 \quad DF = 18$$

where MD = is import duties; Y = GDP, and

$$\text{Log MD} = -1.75 + 0.98 \log \text{IM} \qquad (3)$$
$$(29.03)$$
$$R^2 = 0.97 \quad DW = 1.66 \quad DF = 18$$

where, IM = is total imports; MD = as above, and,

$$\text{Log IM} = -3.87 + 1.59 \log Y \qquad (4)$$
$$(22.06)$$
$$R^2 = 0.96 \quad DW = 1.82 \quad DF = 18$$

Equation (2) above gives the income elasticity of import duty which is clearly well above unity and significant at the 1% level of

confidence as measured by the t-statistic. The high R^2 = 96 indicates a strong association or effect of an increase in GDP on the import duties revenues. However, equation (3) which relates import duties to its presumed base while indicating a strong relationship as given by the relevant R^2, however, the fact that the elasticity of the tax to its base is below unity may be interpreted to mean that the tax base is not properly taxed. This may be due to the existence of far too many exemptions; the changing mix of imports due to import substitution or both. On the other hand, equation (4) which relates the tax base to GDP shows that the income elasticity of the tax base will above unity stand at 1.59; which is significant at the 1% level of confidence. There is a strong relationship between GDP and the tax base given by the R^2 of 0.96. Together, the above results mean that if the tax base is to be properly taxed, then there is a good revenue potential from import duties taking into consideration the already high income elasticity of the tax as well as that of the tax base to income.

(3) Excise Duties Elasticities

Similar to that of import duties, excise duties elasticities to income; to base and the base to income (GDP) were calculated. The value added in the manufacturing sector was taken as a proxy to the excises tax base. The results of the excise elasticities are given as follows:

$$\text{Log ED} = 7.40 + 1.68 \log Y \qquad (5)$$
$$(5.61)$$
$$R^2 = 0.63 \quad DW = 1.63 \quad DF = 18$$

where, ED = Excise duties; Y = GDP and

$$\text{Log ED} = 2.25 + 1.20 \log IND \qquad (6)$$
$$(7.47)$$
$$R^2 = 0.75 \quad DW = 1.78 \quad DF = 18$$

where, ED = as above; IND = value added in manufacturing

$$\text{Log IND} = -4.71 + 1.47 \log Y \qquad (7)$$
$$(17.52)$$
$$R^2 = 0.94 \quad DW = 1.65 \quad DF = 18$$

where, the variables as above and all figures in parenthesis represent the relevant t-values.

It is apparent from equation (5) above that the income elasticity of excise duties is 1.68 which is significant at the 1% level of confidence given by the relevant t-value. The relationship between excise duties and GDP though less than that of import duties yet still significant given by an R^2 of 0.63. The relevant DW indicates no autocorrelation between the two variables. Equation (6) on the other hand which relates the excise duty to its base reveals a stronger correlation demonstrated by a higher $R^2 = 0.75$, however although the elasticity is above unity yet it is well below that of the duty to GDP elasticity. This may as well be read as an indication of the low coverage of the tax base; the more the coverage the higher is the elasticity. If this is coupled with the high elasticity of the tax base to GDP given in equation (7) which is 1.47 with a strong relationship, then one could conclude that the present system is potentially revenue productive and more so it would be the wider its coverage is. Moreover, to look further into the excise systems, the excise duties as said before were disaggregated to the product level taking the four main excisable products, i.e. cigarettes; petroleum products; cement and alcohol, the duties on which represent over 95% of the total excise duties. The elasticity of the excise duty of each product to its base, i.e. the commodity production was calculated and their results are given below:

(a) <u>Cigarettes duty elasticity</u>

$$\text{Log CTE} = -0.40 + 2.10 \log \text{CTP} \qquad (8)$$
$$(14.80)$$
$$R^2 = 0.92 \quad DW = 2.47 \quad DF = 18$$

where, CTE = is cigarette excise duty, CTP = cigarettes production

Clearly the tax is highly elastic with an elasticity coefficient of 2.10. The high R^2 indicates a strong correlation and while the DW-statistic is higher than 2, it nevertheless does not indicate the existance of positive or negative autocorrelation. It is worth noting here that the impact of smuggling is not accounted for which is, in fact, very hard to determine. Nevertheless, the very high elasticity indicates at least partially a high tax effort and that the tax base is properly taxed. Any change of the tax rate from its specific nature to an ad valorem one, alongside more efforts towards combating smuggling may very well result in considerable increase in revenues generated from this source.

(b) Petroleum Products

$$\text{Log PTE} = -0.92 + \underset{(1.63)}{0.36} \log \text{PTP} \qquad (9)$$

$$R^2 = 0.13 \quad DW = 2.36 \quad DF = 18$$

where, PTE = Excise duty on Petroleum Products,

PTP = Petroleum Production

Unlike that of cigarettes, the elasticity of excise duty on petroleum products to its base is inelastic given by the very low coefficient of 0.36. This is further manifested by a poor correlation coefficient as the coefficient of determination ($R^2 = 0.13$) and t-value indicates. This poor relationship and low elasticity was something to be expected, because up to 1979 which the data covers, petroleum products were lightly taxed which amounted to a government subsidy by abstaining from increasing petroleum prices notwithstanding the vast increases in oil prices since 1973-74, which in turn was reflected in a sizable oil import bill increased to about JD 85 million or about 90% of Jordan's total exports.

(c) Cement duty elasticity

$$\text{Log CE} = 5.62 + 1.001 \log \text{CP} \qquad (10)$$
$$(4.83)$$
$$R^2 = 0.56 \quad DW = 1.75 \quad DF = 18$$

where, CE = Excise duty on Cement, and

CP = Cement Production ( ), t-value.

The elasticity of cement duty to cement production is nearly one. The coefficient of determination R^2 is higher than that in the case of petroleum products indicating a better relationship and the DW statistic indicates no autocorrelation problem. Due to the fact that there is only one cement factory in Jordan with good potential for enforcing the tax, the elasticity could have been expected to be more than unitary. However, cement production has been dwindling due to some technical and manpower problems, and the prospect seems to be towards increased production once the new factory starts production, which given the elasticity will result in increased revenues.

(d) Alcohol Production

$$\text{Log ALE} = -10.04 + 1.18 \log \text{ALP} \qquad (11)$$
$$(10.26)$$
$$R^2 = 0.85 \quad DW = 1.55 \quad DF = 18$$

where, ALE = Alcohol excise duty; ALP = Alcohol Production

The relatively high R^2 at 0.85 indicates a strong correlation between the tax and its base. The elasticity is above unity at 1.18 and significant at the 1% level of confidence. The DW-statistic is low but indicates no autocorrelation. Despite the above unitary elasticity, alcohol excise is not revenue productive for reasons mentioned earlier, however given the small level of production the high tax rates maintained the elasticities level above unity.

4. The Income Elasticities of Fees and Licences

The elasticities of taxes on services, that is, fees and licences to GDP were computed the results are given below respectively.

$$\text{Log } F = 5.16 + 1.19 \log Y \qquad (12)$$
$$(7.82)$$
$$R^2 = 0.77 \quad DW = 1.67 \quad DF = 18$$

$$\text{Log } LI = -41.8 + 8.66 \log Y \qquad (13)$$
$$(14.31)$$
$$R^2 = 0.92 \quad DW = 1.52 \quad DF = 18$$

where, F = revenues from fees

LI = revenues from licences, and

Y = GDP at factor cost

( ) = t-value

As equation (12)demonstrates the income elasticity of fees revenues is above unity and thus significant at the 1% level of confidence. A reasonably strong relationship with GDP exists as indicated by the coefficient of determination $R^2 = 0.77$ and the DW statistic indicates no autocorrelation problem. Similarly licences are highly income elastic with an elasticity of 8.66, perhaps this high elasticity reflects, among other things, the high revenues of land and building tax.

5.5. Concluding Remarks

The analysis of indirect taxes in this chapter shows that they dominate the Jordanian tax system. Import duties in particular provided over 72% of the total indirect taxes and about 48% of domestic revenues in 1979. In general the tariff policy in Jordan, as well as the bulk of indirect taxes, is guided principally by the revenue objective, and to a lesser extent by equity and development considerations. Notwithstanding the importance of the revenue aspects, the indirect taxes are

characterized by a wide scale of exemptions and exceptions which in the end limits the revenue productivity of the taxes as well as achieving the other objectives. On the other hand, for reasons mentioned in the text Jordan limits its export taxes to those on phosphate, mosaic and cement products. However, even these two limited taxes were conditioned by circumstances related particularly to the phosphate industry and perhaps that tax specifically was ill conceived and implemented, hence resulted in nothing except perhaps negatively affecting the performance of the company itself.

Excise taxes on the other hand were limited in coverage though relatively revenue productive. However, so far as the revenue aspect is concerned the excise system is still far from satisfactorily contributing to the overall domestic revenues. In view of the changing economic structure with its obvious impact on the composition of imports, it would seem very important, both for the medium and long-term, that import duties be coordinated with internal taxes in such a manner that allow the achievement of the overall objectives of the tax system be it revenue, equity or development and resource allocation. In that sense, the need arises for the augmentation of other taxes on services and transactions with import and excise taxes for the fulfilment of such objectives with an open mind on the part of the authorities on possible areas of change and improvement. In that area in particular efforts should perhaps be made in simplifying the taxes levied through eliminating the unnecessary number of levies when such levies could be augmented in one or more. By and large, the elasticities of indirect taxes seem to be encouraging in the long-run, however, proposals in certain areas made in discussing certain aspects, if carried, could prove to have a significant impact on the overall performance of the tax system.

CHAPTER SIX

TAXABLE CAPACITY AND REVENUE INSTABILITY IN JORDAN

INTRODUCTION

It was only relatively recently that the problem of assessing taxable capacity or tax potential has received considerable attention. However, it should be acknowledged from the outset that taxable capacity is still an elusive concept that defies precise definition or measurement. This concept seems to have originally been developed to indicate the upper limit up to which the people of a country, given its circumstances, could be taxed. The fact that taxation was seen to impose a burden on the population, stimulated the inquiry into the possible maximum burden that can be imposed on the people at any given period of time.

However, the view that taxation imposes a burden on people is subject to controversy on the grounds that it is public expenditures that divert real resources from the private to the public sector. Therefore, unless the pattern of use of the proceeds of taxation is specified, the burdensome aspect of taxation could be challenged[1]. In this sense taxation can be seen to impose a burden on the community if the proceeds are used for say ornamental buildings and lavish government expenditures. Yet on the other hand, if such proceeds obviated the need for more private sectors expenditures on the essential needs such as, say health and education, then the extra revenues could be much more easily generated with perhaps lesser objection from the population as to their burdensome aspect. However, one cannot help but to think that most taxes may be shown to have some adverse

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1. Raja Chelliah, "Tax Potential and Economic Growth in the Countries of the ECAFE Region", Economic Bulletin for Asia and the Far East. vol. XVII, No.2, (September, 1966), p.36.

effects on one group of people more than others.

Therefore, it would seem very hard to devise a clear-cut definition or measurement formula for taxable capacity to be applicable to all countries at all times. As a United Nations Study has concluded, "there is no categorical answer to the question where the optimum level of taxation lies"[2].

In view of the above argument, any method to be used in measuring tax capacity or tax potential would be an approximation and hence should be taken with caution. For one thing, taxable capacity is influenced by a wide range of factors, some are measurable others are not, reflecting the economic and political structure of the country.

However, given the above one could look at taxable capacity in two different ways. First, in an extreme case following Kaldor and Chelliah, one may assume that taxation imposes no social and political burden on the community and therefore, taxable capacity may be defined as the difference between the national output and subsistance consumption which allows the population to maintain its labour capacity[3].

It is argued that any measurement of the surplus over subsistance level of consumption is a task practically near to impossibility, and perhaps more so in developing countries. Chelliah himself maintained that "while to equate the surplus over subsistance consumption with maximum taxable capacity leads us nowhere, a rough measure of the size of the mobilized surplus in relation to the GNP can serve as a basis for judging the scope for, and possibility of, additional taxation in the country"[4].

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2. United Nations "Taxes and Fiscal Policy in Under-developed Countries", (New York, 1954), p.7.
3. R. Chelliah, op.cit., pp.39-40
4. Ibid., p.38.

Secondly, given the difficulties involved in estimating the economic surplus in the economy, a more dynamic approach of approximating taxable capacity has been subject to analysis during the past ten years or so and usually referred to as "the tax effort or tax ratio approach". Here, tax capacity is defined after Bahl as "the tax ratio that would result if a country applied to its tax bases a set of "average" effective rates on those bases - these rates are computed as net regression coefficient ..."[5]. In this sense it is assumed that tax base are approximated by variables reflecting the main characteristics of the economy which affect the tax ratio. Hence the estimated tax ratio represents the minimum taxable capacity in the economy given its major characteristics. On the other hand, the same factors which are presumed to affect tax capacity, among other factors, determine the stability or instability of tax revenues.

It is therefore rather obvious that being unable to measure the economic surplus properly in order to get a measure of maximum tax capacity, the second approach, that is, what came to be referred to as the "effort" approach is used to approximate the minimum tax capacity in the economy. The second important issue to be discussed in the present chapter is an estimation of how unstable tax revenues are in Jordan and what are the main components of the tax system contributing to such instability.

Therefore, in section one a review of earlier studies is given. Section two presents the model and statistical results in the case of Jordan and, section three discusses the revenue instability in Jordan.

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5. See Roy W. Bahl, "A Regression Approach to Tax Effort and Tax Ratio Analysis" IMF Staff Papers, vol. 18, March 1972, p.572.

6.1. A Review of Earlier Empirical Studies

During the last two decades or so, a considerable number of empirical studies on the determinants of taxable capacity have been carried out, most of which have concentrated on cross-country analysis to examine the differences of tax ratio's among countries. In this section a review of these studies is presented with our attention given mainly to their empirical results.

6.1.1. A Review

Perhaps the first investigation of the relationship between government revenue shares and the level of economic development was that of Harry Oshima. In his study, Oshima[6] ranked 32 developed and developing countries by the proportion of government receipts to GDP at current prices and found a direct relationship between the share of the government in the economy as measured above and the level of economic development as measured by per capita income. In 20 developed countries out of his sample of 32, revenue shares ranged from 19% in Israel to 35% in the UK, while the less-developed countries ranged from 19% to 8%.

Similarly, Martin and Lewis[7] in their study of 16 developed and less-developed countries found six developed countries with a ratio of total government revenue to GNP ranging from 24%-37%, while in ten less-developed countries the ratio was ranging between 8% and 22%.

However, the earliest systematic statistical analysis was perhaps that of Williamson[8]. In a sample of 33 countries (developed and developing) he found a significant positive relationship between the tax

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6. Harry T. Oshima, "Share of Government in Gross National Product in Various Countries", American Economic Review, vol XLVII, (June 1957), pp.381-90.

7. Alison Martin & W. Arthur Lewis, "Patterns of Public Revenue and Expenditure", The Manchester School, vol. XXIV, (Sept. 1956), pp.204-44.

8. J. Wiliamson, "Public Expenditure and Revenue: an International Comparison", The Manchester School, vol. XXIX, (Jan. 1961), pp.43-56.

ratio and per capita income. In 17 developed countries the ratio ranged between 20% and 35%, and in the 16 developing countries the ratio ranged between 9% and 21%.

Plasschaert[9] introduced a proxy variable for the "openness" measured by the import/GNP ratio in conjunction with per capita income as a proxy measure for the stage of economic development. In a sample of 20 developing countries, he found a significant relationship between the tax ratio and that of the import ratio, but not between per capita income and tax ratio.

U Tun Wai[10] in his study on taxation problems in developing countries asserted the existence of a positive relationship between revenue shares and per capita income in developing countries. Hinrichs[11], using a regression analysis of 60 developed and developing countries, set out to determine the existence of this relationship among developing countries and if it existed to explain why. Using a multiple regression analysis of both a linear and double-logarithmic forms, he found that while there was a highly significant relationship between government revenue shares $(\frac{R}{Y})$ and per capita income $(\frac{Y}{N})$ in all 60 countries, none existed among only developing or developed countries taken separately. Using import ratio as an alternative index, he found a highly significant relationship between $(\frac{R}{Y})$ and $(\frac{M}{Y})$ for all countries with per capita income below \$150, \$300, \$500 and \$750. However, when combined with per capita income its significance was reduced for the group of 40 countries with per capita income less than \$500. However, these results were

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9. Sylvain Plasschaert, Taxable Capacity in Developing Countries, IBRD Report No. EC-103, Washington, 1962.

10. U Tun Wai, "Taxation Problems and Policies of Under-developed Countries", IMF Staff Papers, vol. IX, No.3, Nov. 1962.

11. Harley H. Hinrichs, "Determinants of Government Revenue Shares Among Less-Developed Countries", Economic Journal (1965) pp. 550-556. It is worth noting that Hinrichs sample of 60 countries was divided into four groups according to their level of per capita income, Group I, under \$150; II, \$150-299; III,\$300-749, and group IV \$750 and over.

criticised by Tanzi & McCuiston, who concluded that Hinrichs' conclusions "cannot be assumed to hold for all the under-developed countries, but only for that group of very poor countries for which the market economy is largely limited to the foreign trade sector[12]. Roe in 1968, testing Hinrichs' data by adding another 10 African countries with per capita income less than $150, confirmed that with the different sets of data, the relationship between "openness" $(\frac{M}{Y})$ and $(\frac{R}{Y})$ is closer than the relationship between per capita income $(\frac{Y}{N})$ and $(\frac{R}{Y})$[13].

However, in a study of 52 developed and developing countries Thorn[14] arrived at different conclusions. He used four dependant variables to explain the central government revenue ratio to GNP, these are per capita GNP; import ratio; and two dummy variables, one for British dependancies of former colonies and the other for decentralization effect. His results showed that the addition of the import ratio, though increased the correlation coefficient only slightly however, the import ratio was not significantly different from zero. Also, the 'cultural effect' was found to exert significant influence on the variation in government revenue shares.

Weiss[15] applied the same approach and used dummy variables, in addition to per capita income and import ratio, reflecting factors related to the political, cultural and social aspects. He introduced variables for urbanization, literacy rate, level of employment in the agricultural sector and an index for mass communication and found that such factors could explain the variations in the tax ratio instead of per capita income without substantially reducing the explained variance.

12. Vito Tanzi and Clayton McCuiston, "Notes and Memoranda : Determinants of Government Revenue Shares Among Less-developed Countries", Economic Journal vol. 77, June 1967, pp.403-5.

13. Alan R. Roe, "The Government - Revenue Share in Poorer African Countries - A Comment", Economic Journal, vol. 78, 1968, pp.479-481.

14. R.S. Thorn, "The Evolution of Public Finances During Economic Development" The Manchester School, vol. 35, 1967, pp.46-47.

15. S.J. Weiss, "Factors Affecting the Government Revenues Share in Less Developed Countries", University of West Indies, Social and Economic Studies, vol. 18 (1969), pp. 348-64.

He also found that the effect of the geographic position of the countries does affect the ratios.

In a frequently quoted article, Lotz and Morss[16] used per capita income and an 'openness' variable measured by the sum of exports (f.o.b.) and imports (c.i.f.) as a percentage of GNP instead of the import ratio, to explain tax ratio differences in 72 developed and developing countries. They found that both variables were highly significant when applied to all countries and explained about 64% of the variations. However, when the 52 developing countries in their sample were taken separately they found that although the two variables were significantly related to the tax ratio, however, they did not account for a large part of the variance among ratios, i.e. R^2 was reduced from 0.639 in the first case to only 0.197 in the second.

In a second study[17], the authors introduced new variables to their analysis, particularly related to the tax bases. First, a monetization variable was introduced using three proxy variables, i.e. money supply M_1, M_2 and M_3. They found that the narrow definition of money M_1 was superior to the other two. Furthermore, although the degree of monetization variable was significant, it nevertheless lowered the significance of per capita income. They also introduced variables to measure the effect of the export composition and government centralization. Although the two variables were significant however, they did not increase the explanatory power of the model. They concluded that the government decentralization has a direct impact on tax levels and the trade surplus gave the best result as a proxy variable for the openness of the economy.

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16. Jorgen R. Lotz and Elliott R. Morss, "Measuring 'Tax effort' in Developing Countries", IMF Staff Papers, (Nov. 1967), pp.478-497.

17. Jorgen R. Lotz and Elliott R. Morss, "A Theory of Tax Level Determinants for Developing Countries", Economic Development and Cultural Change, vol. 18, No.1, (Oct, 1969) pp.328-341.

Bahl was one of those who perhaps contributed significantly to tax effort analysis. In his first article[18] he developed a model in terms of three general determinants of taxable capacity, namely, the size of the foreign trade sector as measured by the export ratio (X_Y) both on a priori and empirical consideration based on his sample; the stage of economic development, as measured by per capita income; and finally, some measure of the sectoral composition of value added, measured by both the agricultural share and the mining share. He used a positive approach whereby the goodness of the fit would be the criterion for choosing bases. Accordingly variables that are not significantly related to the tax ratio would be excluded. However, he emphasized that the goodness of fit is applied only when there is a choice between variables that seem equally acceptable on a priori grounds. He found a high collinearity between the mining and agricultural share and that of exports, so the latter was dropped. Both the mining and agricultural share in GNP were significant determinants of inter-country differences in taxable capacity.

In 1972 Bahl developed a new model[19] so that taxable capacity may be computed as a linear combination of the set of effective tax rates and the assumed tax bases. He applied his model to 49 developing countries and concluded that although the distribution of tax effort indices in his model did not differ significantly from that obtained in earlier studies of regression analysis however, the new model does possess flexibility to permit a direct inter-country comparison of the intensity of use of various tax findings. He generally confirmed the importance of the sectoral composition of the economy as a determinant of the tax capacity.

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18. Roy W. Bahl, "A Regression Approach to Tax Effort and Tax Ratio Analysis", op.cit., pp.570-609.

19. Roy W. Bahl, "A Representative Tax System Approach to Measuring Tax Effort in Developing Countries", op.cit., pp.87-121.

Kilman Shin[20], in a study of 47 developed and developing nations, introduced three new variables in addition to per capita income and the foreign trade ratio (exports and imports) to GNP. These variables are: the agricultural income ratio to GNP ($\frac{A}{Y}$); the rate of change of prices ($\frac{\Delta P}{P}$); and the rate of growth of population ($\frac{\Delta N}{N}$). He found that in the low income countries, the variations in tax ratio may be caused by differences in rate of price changes, rate of growth of population, and the degree of industrialization. Neither the per capita GNP nor openness was found to be a significant factor in contrast to results reached when applied to both developed and developing countries. Notwithstanding the fact that his results showed that per capita income was not statistically significant in the case of low income countries, yet he reasoned this difference among the two groups of countries might have been due to the introduction of other variables. Therefore he concluded in normative manner that, "in order to increase tax ratio, we may have to increase, as a method, per capita income"[21].

By the early 1970's the subject of measuring taxable capacity and tax effort in developing countries seemed interesting to the UN institutions. UNCTAD[22] carried out a study of 36 developing countries by pooling cross section and time series data for a period of 16 years 1950-1960. Both per capita income and the share of the agricultural sector in total income were found to be significant despite their high collinearity. However, when the model was tested on cross section data for particular years, the problem of collinearity seemed to be significantly in force and resulted in one or both of the variables being insignificant.

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20. Kilman Shin, "International Differences in Tax Ratio", The Review of Economics & Statistics, vol. LI, 1969, p.215.

21. Ibid., p.217.

22. United Nations Conference on Trade and Development, Objectives for the Mobilization of Domestic Resources - Mobilization of Resources for Development (mimeographed, Doc. TDIBIC.3/751 Add. 1, February 23, 1970).

The openness variable remained significant. They concluded then that tax ratios are higher in more open economies with the relatively low level of agricultural income.

More recently the International Monetary Fund embarked on a number of studies on tax ratio analysis. In one of these studies, Chelliah[23] used per capita non-export income as a proxy for the stage of economic development to avoid overlapping with exports; export ratio was used as a proxy for openness (excluding mineral exports for the same reason); and later added the agricultural sector ratio to GNP. Running the first three variables together he found that the mining share is highly significant, the export ratio excluding mineral exports is also significant, and per capita non-export income not statistically significant; and the total degree of explained variations in the tax ratio is 39 per cent, a rather low one. However, he suggested substituting the agricultural share to per capita income as a proxy for the stage of development. When the model incorporating the export ratio, the agricultural, and the mining share was tested, he found that the mining share was highly significant and positively related to the tax ratio, the agricultural share was not significant and negatively related to the tax ratio, and the export ratio not a significant determinant. However, dropping the export ratio gave a better result and both variables were significant. In conclusion, the mining share was a very important determinant, and more importantly he favoured including per capita income, though it was statitically not significant on a priori basis.

A second study updating the first one carried out by Chelliah, et al.,[24] came virtually to the same conclusion and its results did not differ

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23. Raja Chelliah, "Trends in Taxation in Developing Countries", op. cit.

24. Raja Chelliah, H.J. Bass, and M.R. Kelly, "Tax Ratios and Tax Effort in Developing Countries, 1969-1971", IMF Staff Papers, 1975, vol.22, No.1, pp.187-205.

generally from those of the first study.

Most recently Matsebula[25] formalized a model incorporating per capita GNP; mining and manufacturing share; trade ratio (export and inport) and a number of dummy variables representing geographical location. The model was fitted to pooled cross-section and time series data from 17 African countries. He found that neither the mining ratio nor the dummy variables were significant at the 5 per cent level. However, dropping these variables did not improve the fit. He concluded that the industrial share and geographic location do not seem to influence the tax ratio as hypothesized. He reasoned this conclusion by: (i) The existence of tax concessions made available to the mining and manufacturing sector and (ii) the possibility of moving the economic surplus from this sector out of the host country by multinational corporations.

Finally, in a recent work on the Sudan, M. Ali[26] using time-series data tried to show that conclusions derived from cross-section data do not necessarily hold when time series data is used. He concentrated on the openness hypothesis by testing it using both cross-country and time-series data for the Sudan. While he found that import-ratio was not a significant variable based on his time-series data, nevertheless concluded that such a difference between cross-country and time series data may be justified on the grounds that the share of luxury items in total imports in the inter-country case differs from a single country because such a share is determined by other factors which do not change significantly on year to year basis. Because of this he infers that the behaviour of the share of luxury imports remains fairly constant.

6.1.2. Limitations and Usefulness of Earlier Studies : A Comment.

From the above reviewed empirical studies one could gather that they

25. M.S. Matsebula, "Tax Ratios in Africa", The South African Journal of Economics, vol. 47, No.2, (June 1979), pp.156-165.

26. M.A.R. Ali, "Determinants of Government Revenue Shares in Developing Countries : A Note", Public Finance, vol. 29, No.2, 1974, p.221.

agreed in principal that taxable capacity is related to the structure of the economy in developed countries and their stage of economic development. However, as has frequently been seen, some of these models suffered from specification errors, either resulting from mis-specification related to the choice of variables or that of the model itself. Furthermore, there has always been assertions on specific developing countries taxable capacities deduced from inter-country studies. These assertions should be taken cautiously when adapted to particular countries. This is so particularly because, inter-country analysis concentrated on a single point in time for a vast number of developing countries, among which a considerable number of differences take place, be it cultural, political social structure, income distribution and so on. The very existence of such differences may cast some doubts on any inferences made for particular countries based on inter-country analysis.

Moreover, differences in data collections and reliability and in some cases even classification should be given particular importance, because statistical practices especially among developing countries, where mostly no statistical standard of data classification is followed, may very well affect the results.

In addition, the combination of developed and developing countries may reduce the credibility of results, because for one reason such combination proved to have in many instances affected the results very significantly. It remains, however, to be seen whether such inter-country models could prove valid when applied to a time series of a single country.

It should be acknowledged though that a number of these studies have tried to overcome some of these difficulties by introducing dummy variables. Others tried pooling time series and cross-section data. However, although such an exercise may have some advantages, it nevertheless has a number of statistical disadvantages which may well affect the results,

some times considerably.

By and large, despite the limitations of the regression technique, it may be considered a good approach in explaining tax ratios, perhaps when it is particularly applied to a given country taking into consideration its economic structure and circumstances separately.

6.2. Determinants of Taxable Capacity in Jordan

Having briefly reviewed earlier studies which were carried out with applications both to developed and developing countries, the analysis is carried forward in this section and applied to the particular case of Jordan based on time series data. Our choice of the variables as well as the formulation of the model depends on the goodness of fit of the data and the a priori reasons wherever applicable.

6.2.1. The Variables

The variables used in this analysis, needless to say, are factors related to taxable capacity only or what are some times termed "non-effort" factors. This means that factors related to tax-effort are excluded. Factors which were found to be significantly related to taxable capacity, both on a priori basis and empirical grounds were chosen. Such factors are:

(a) Per Capita Income (GNP) $(\frac{Y}{P})_t$: It is argued that per capita income is one of the most important variables either as an indicator of the level of development or as it is presumed to increase tax capacity through increasing the taxable surplus.

(b) The Degree of Monetization $(\frac{O}{Y})_t$: It is plausible to assume that a more monetized economy reflects a degree of commercialization, organization and an important "modern" sector as against the subsistence sector. Hence, on a priori basis, it is assumed that tax capacity is affected by that percentage of GNP passing through the market. The

proxy measure for the degree of monetization is subject to some controversy. Three candidates for this purpose are considered, i.e. a narrow definition of money supply, e.g. coins and notes (M_1); Coins notes and demand deposits (M_2); and coins, notes, demand deposits and time and savings deposits (M_3). For the purpose of our analysis a wider definition of money supply (M_3) is more appropriate to reflect the percentage of GNP that passes through the market.

(c) The Share of Mining and Manufacturing Sector $(\frac{I}{Y})_t$: This factor is sometimes used instead of per capita GNP to reflect the stage of development alongside the agricultural sector. However, it is plausible to assume that the more this sector is developed, the more the surplus in the economy and therefore the more tax potential there is. This is because it reflects a more developed corporate sector, easily identified and administratively as well as politically more easier to tax.

(d) The Share of the Agricultural Sector $(\frac{A}{Y})_t$: As alluded to above, the sectoral composition of the economy reflects the degree of development. It is argued that the more important the agricultural sector the lesser is the tax capacity. This is because this sector is associated with the subsistence levels in developing countries; low income per capita; low profit margins and is not amenable administratively to taxation.

(e) The Rate of Population Growth $(\frac{\Delta N}{N})_t$: It is argued that a greater rate of population growth necessitates more tax exemptions and hence lower tax potential. Some argue however, that the increased population may have positive effect on the potential through its effects on consumption[27].

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27. See for example Shin, op.cit., pp.213-220 who argues that the effect of population growth depends on the tax mix in the economy. If the proportion of income tax revenues is markedly small, the impact of population growth may be positive because of greater consumption expenditures and hence increased indirect tax payments.

(f) The "Openness" of the Economy $(\frac{M}{Y})_t$: The degree of openness is measured here by the import ratio to GNP. Arguments about it were advanced in chapter three.

(g) The Rate of Change of Prices $(\frac{\Delta P}{P})_t$: Inflation as measured by the rates of change of consumer price index is considered a factor affecting the tax capacity positively, particularly if a progressive tax rate structure is in force. Increases in prices shifts taxpayers into new income brackets for which higher tax rates are applied. It also increases expenditures on consumption hence increasing indirect tax collections.

(h) A Dummy variable (D_1) was introduced to allow for the effect of the loss of the West Bank.

It is worth noting here that such factors are related to tax capacity rather than tax effort. Also consideration may have been given to measurable factors, yet it is well in mind that a wide number of variables may be considered such as income distribution, political stability, etc., such factors which are either immeasurable or data is unavailable.

(i) Foreign Aid Ratio $(\frac{F}{Y})_t$. This is a new variable which has not been tested in other models of tax ratio analysis. The choice of this variable as a potential variable determining taxable capacity in Jordan lies basically on a priori grounds. As has been alluded to elsewhere in this thesis, it is believed that the inflow of foreign aid may have created a built-in inflexibility in the government's willingness to tax. Therefore, it is related in this sense to tax effort rather than to taxable capacity. However, it is also related, perhaps indirectly, to taxable capacity because of its direct effect on the level of per capita income on the one hand, and the growth of different sectors of the economy on the other hand. Foreign aid as an independant variable is measured by the ratio of foreign resources, i.e. budget-support, economic and technical assistance and foreign loans to GNP. It is worth noting that the impact

of this variable on domestically generated savings have been subjected to rigorous analysis in a number of studies on savings in developing countries[28] and was found to have a negative effect on such savings. By and large, it is argued that, in the particular case of Jordan, without foreign aid the pace of economic development would not have been maintained and by implication the level of national income which was achieved would not have been possible to be attained. Therefore, foreign aid could prove to be one of the most important determinants of the taxable capacity in Jordan.

Our dependant variable was chosen to be the ratio of Central Government domestic revenues to GNP, coded $(\frac{TR}{Y})_t$. Domestic revenues were chosen rather than total government revenues, for that the latter included the total amount of foreign resources inflow. Therefore, since foreign resources are exogenous to the Central Government revenues and are not basically affected by the structure of the economy or as part of taxable capacity, they have to be deducted.

6.2.2. The Data

Originally the model was tested for Jordan as a whole using data for the period 1954-1979. However, in order to account for the loss of the West Bank, a dummy variable was first introduced and then data for the period 1967-79 only was used. As for the variable or change in the price level $(\frac{\Delta P}{P})$, data is only available for the latter period, i.e. 1967-79 because the cost of living index was first calculated in 1967. However, it is well documented in various government publications, as discussed in chapter one, that Jordan enjoyed a price stability during the 1950's

28. A representative sample of these studies may include; Douglas Dacy, "Foreign Aid, Government Consumption, Saving and Growth in Less-Developed Countries", The Economic Journal, vol. 85 (Sept. 1975): 548-561; H.B. Chenery and Michael Bruno, "Development Alternatives in an Open Economy: The Case of Israel", The Economic Journal, vol. 72 (1962): 79-103; H. Chenery & Alan Strout, "Foreign Assistance and Economic Development". American Economic Review, vol. 56 (Sept. 1966): 679-733.

and 1960's.

6.2.3. The Model

The regression approach, despite its limitations was used. The model to be fitted to empirical data is of the general form:

$$\left(\frac{TR}{Y}\right)_t = f\left(Y; \frac{M}{Y}; \frac{F}{Y}; \frac{Q}{Y}; \frac{\Delta N}{N}; \frac{\Delta P}{P}; \frac{I}{Y}; \frac{A}{Y}; D\right)_1 \quad \text{where}$$

$\left(\frac{TR}{Y}\right)$ = Total central government domestic revenues to GNP.

$\left(\frac{Y}{P}\right)$ = per capita GNP.

$\left(\frac{M}{Y}\right)$ = Imports ratio to GNP.

$\left(\frac{F}{Y}\right)$ = Foreign aid ratio to GNP

$\left(\frac{Q}{Y}\right)$ = ratio of money supply (M_3) to GNP, $\left(\frac{A}{Y}\right)$ = share of Agricultural sector in GNP.

$\left(\frac{\Delta N}{N}\right)$ = Rate of change in population.

$\left(\frac{\Delta P}{P}\right)$ = Rate of change in the level of consumer prices.

$\left(\frac{I}{Y}\right)$ = The share of mining, manufacturing and quarrying in GNP.

(D) = Dummy variable for the loss of the West Bank.

The expected partial regression coefficients are:

$$\frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{Y}{P}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{M}{Y}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{Q}{Y}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{I}{Y}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{P}{P}\right)} > 0 \quad \text{and,}$$

$$\frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{F}{Y}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{N}{N}\right)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial(D)}, \quad \frac{\partial\left(\frac{TR}{Y}\right)}{\partial\left(\frac{A}{Y}\right)} < 0$$

6.2.4. Statistical Results

Basically a positive relationship was postulated between per capita GNP (Y_p) and the ratio of Central Government domestic revenue to GNP. In order to test the effect of Y_p, ceteris paribus, per capita GNP was taken separately using the three functional forms, namely, linear; double-log; and semi-log. The simple linear form fitted the data best. The result as presented in Table 6.1, shows a positive relationship which is statistically significant at the 1% level of confidence. Equation one reveals that Y_p, assuming everything else constant, explains 37% of the variation in the tax ratio as given by the relevant R^2. The DW statistic associated with the regression indicated no autocorrelation problem. Furthermore, no significant changes occurred when the equation was transformed into semi-log or double-log forms, however for comparison purposes the results of all the regressions are given in Appendix Table (16).

Combining the import ratio (M_Y) and (Y_p) in a multiple regression, (equation 2), did improve significantly the explanatory power of the model. $\bar{R}^2$ for example increased from 0.37 to 0.59. However, the introduction of M_Y resulted in undermining the significance of Y_p markedly, while the import ratio was statistically significant at the 1% level of confidence. The double-log form gave the best fit of the data and while the DW statistic was well above the point 2 mark yet it indicated no autocorrelation. Both variables explained about 59 % of the variations in $(\frac{TR}{Y})$ as given by the relevant $\bar{R}^2$.

In equation 3, the introduction of the foreign aid variable to the model did not make any difference as to the explanatory power as explained by $\bar{R}^2$ in either of the three formulations mentioned above. However, neither the significance of the foreign aid variable nor the sign it assumed were compatible with our initial assumption. The foreign aid ratio was statistically insignificant in explaining the tax ratio and took

Table (6.1) Regression Results : Determinants of Central Government Total Domestic Revenues, 1954-1979

Dependant variable	Inter-cept	Y_P (JD)	$\frac{M}{Y}$ %	$\frac{F}{Y}$ %	$\frac{Q}{Y}$ %	$\frac{\Delta N}{N}$ %	$\frac{I}{Y}$ %	$\frac{A}{Y}$ %	$\bar{R}^2$	DW	DF	Type of Regression	eg. No.
$(\frac{TR}{Y})$	13.56	0.029 (3.77)[a]							0.34	1.89	24	linear	1
$\log(\frac{TR}{Y})$	-0.37	0.04 (0.66)	0.77 (3.99)[a]						0.59	2.30	23	log-log	2
$\log(\frac{TR}{Y})$	-0.42	0.05 (0.77)	0.72 (3.34)[a]	0.07 (0.58)					0.58	2.35	22	log-log	3
$\log(\frac{TR}{Y})$	-0.28	-0.08 (-0.90)	0.59 (2.82)[a]	-0.04 (-0.36)	0.34 (2.13)[b]				0.63	2.41	21	log-log	4
$\log(\frac{TR}{Y})$	-0.28	-0.082 (-0.89)	0.60 (2.70)	-0.05 (-0.38)	0.34 (2.08)[b]	-0.006 (-0.14)			0.61	2.40	20	log-log	5
$\log(\frac{TR}{Y})$	-1.16		0.61 (2.36)[b]	-0.016 (-0.15)	0.32 (2.24)[b]	-0.007 (0.16)	0.03 (0.21)	0.13 (1.05)	0.59	2.41	19	log-log	6
$\log(\frac{TR}{Y})$	-0.95	-0.55 (-0.51)	0.615 (2.32)[b]	-0.046 (-0.36)	0.37 (2.13)[b]	0.002 (0.06)	0.048 (0.32)	0.101 (0.69)	0.68	2.44	18	log-log	7

Notes: (i)* Figures in parenthesis represent t-values

(ii)a Significant at 0.01 per cent level b Significant at the 0.05 level
All measured at a -tail scale.

(iii) For comparisons with other forms, namely linear and semi-log See Appendix Table ( )

a positive sign against a negative one assumed. One may speculate that such a result was influenced by a strong correlation between foreign aid variable and per capita GNP. Moreover, the DW-statistic indicates no autocorrelation problem.

The monetization of the economy was hypothesized to have a positive relationship with the tax ratio. The results of introducing the monetization factor as measured by the money supply (M_3) ratio to GNP in equation 4 did give the assumed association in the model. The money supply variable was significant at the 5% level of confidence and the double-log form gave the best fit to the data, in which the $\bar{R}^2$ has risen to 0.63. Although the introduction of the monetization variable did affect the significance of the import ratio variable, nevertheless the later remained highly significant. Moreover, their was no impact on the foreign aid variable yet due perhaps to a collinearity problem the per capita income variable was reduced to negativity. The DW-statistic associated with equation 4 was inconclusive so that no decision could be made as to whether there is no autocorrelation.

The introduction of the population growth variable $(\frac{\Delta N}{N})$ made no difference either to the explanatory power of the model, whereby the relevant $\bar{R}^2$ remained virtually the same, nor did the variable have any significance. While $(\frac{\Delta N}{N})$ has the expected negative sign, it nevertheless was found statistically insignificant as reflected by the relevant t-ratio. Only the import-ratio and the monetization variable remained statistically significant. Here again the DW-statistic was inconclusive.

It is argued that the sectoral composition of the economy as measured by the ratio's to GNP of the agricultural sector and that of mining, manufacturing and quarrying, could be taken as a substitute to the level of economic development measured by per capita income as a proxy measure. In order to test this hypothesis, the per capita variable was dropped from the model and both variables were introduced. Although their

introduction improved the explanatory power slightly, however both variables were not statistically significant. The insignificance of the agricultural sector may be something to be expected in the case of Jordan because this sector is virtually untaxed, however, as far as the industrial sector is concerned such a result may be interpreted to indicate that this sector was under-taxed in spite of its rising share in GNP. The Durbin-Watson statistic was inconclusive as to whether there was a negative autocorrelation or non autocorrelation problem at all. Retaining the per capita variable did not make any difference neither as to the explanatory power of the model nor to the significance of the variable itself. The explanation that could be advanced here is that either income is not properly taxed on the one hand, or a multi-collinearity problem is perhaps at work because some of the variables included form a component of the Gross National Product. One is inclined to think that has GNP been properly taxed, given that the agricultural sector is completely outside the tax net and the industrial sector is being offered substantial concessions, the income variable would have been significant.

In order to test for the possible effect of the loss of the West Bank, a dummy variable was introduced, however it was found not statistically significant hence was dropped from the model. Another way of looking into this was to separate the data and take the East Bank data alone, which is discussed below.

From the above results it is apparent that the "openness" of the economy as measured by the import ratio and the monetization variable as measured by (M_3) ratio to GNP were the only variables statistically significant in explaining the variations in government revenue shares. It is appropriate therefore to drop those variables which are not statistically significant hence retaining only the above mentioned two variables. The results, which are given in Table 6.3, were not markedly

Table (6.2) Regression Results : Determinants of Central Government Total Domestic Revenues, 1967-79
(East Bank Only)

Dependant variable	Inter-cept	$\frac{Y}{P}$ (JD)	$\frac{M}{Y}$ %	$\frac{F}{Y}$ %	$\frac{Q}{Y}$ %	$\frac{\Delta N}{N}$ %	$\frac{\Delta P}{P}$ %	$(\frac{I}{Y})$ %	$\frac{A}{Y}$ %	$\bar{R}^2$	DW	DF	Type of regression
$\log(\frac{TR}{Y})$	1.71	0.245 (3.17)[a]								0.43	1.47	11	log-log
$(\frac{TR}{Y})$	6.66	0.002 (0.48)	0.22 (4.85)[a]							0.80	1.92	10	linear
$(\frac{TR}{Y})$	-40.18	0.92 (0.75)	11.06 (4.28)[a]	3.37 (1.90)[b]						0.82	1.98	9	semi-log
$(\frac{TR}{Y})$	-60.45	0.25 (0.25)	8.83 (3.86)[a]	2.79 (1.92)[b]	8.11 (2.40)[b]					0.89	2.32	8	semi-log
$(\frac{TR}{Y})$	1.28	0.001 (0.29)	0.17 (4.47)[a]	0.05 (0.76)	0.10 (2.31)[b]	-0.23 (-1.01)				0.90	1.90	7	linear
$(\frac{TR}{Y})$	-7.81		0.18 (6.22)[a]	0.02 (0.41)	0.177 (4.85)[a]	-0.0007 (-0.00)		0.085 (0.91)	0.34 (2.87)[b]	0.96	2.11	6	linear
$(\frac{TR}{Y})$	89.0	1.34 (1.13)	9.14 (5.02)[a]	1.17 (0.85)	12.46 (4.05)[a]	-0.13 (-0.44)		0.21 (0.20)	3.64 (2.42)[b]	0.93	1.92	5	semi-log
$(\frac{TR}{Y})$	0.91		0.17 (3.56)[a]		0.12 (2.31)[b]		-0.001 (-0.17)			0.87	2.03	9	linear

Notes: (i) * See notes to Table (6.1)

(ii) a Significant at 0.01 level, b Significant at 0.05 level.

(iii) For comparisons with the results in other forms see Appendix Table (17).

different from those of other equations. Both variables were statistically significant and the double-log form fitted the data best. The two variables explained about 59% of the variation in government revenue shares as indicated by the relevant $\bar{R}^2$. Also, the Durbin-Watson statistic indicated no autocorrelation problem at work.

Running the same equations on data for the East Bank only, that is, for the period 1967-79 did not make much difference and the generated equations are given in Table (6.2) below.

However, these variables which proved to be not statistically significant were dropped retaining only the two significant explanatory variables. Before comparing the results during the two periods another variable was introduced to the second period to check for the effect of prices, however it was found statistically not significant.

Comparing the results of the two periods it is apparent that there was no change as to the significant explanatory variables, i.e. both import ratio and monetization were the only significant variables in both periods. However, it was noticable that fitting the data for the 1967-79 period only gave much better results. For example, while the two variables explained 59% of the variation in government revenues on the basis of the 1954-79 period, for the East Bank only the same two variables explained about 98% of the variation. Both variables were significant at the 1% level of confidence and no-autocorrelation problem exist. The results of the two periods are reported below in Table 6.3.

As was said before, the results showed that a relatively large foreign trade sector is associated with a high tax level. This is perhaps so for two main reasons. On the one hand, it is administratively easier to tax foreign trade as we have argued in chapter five, and it is politically more feasible on the other hand, for the government to tax foreign trade as against direct forms of taxes. Moreover, because of the administrative difficulties involved, it is plausible to find the

Table 6.3 Regression Results : Significant Factors Determining Taxable Capacity During 1954-79 and 1967-79

Period	Dependant variable	Intercept	M_Y	Q_Y	$\bar{R}^2$	DW	DF	Type of Regression
1954-79		3.98	0.19	0.07	0.59	2.33	23	
	$(\frac{TR}{Y})$		(2.60)[a]	(1.72)[b]				linear
1967-79		1.28	0.17	0.12	0.88	2.05	10	
			(4.88)[a]	(2.78)[a]				
1954-79		-36.02	10.25	3.49	0.59	2.29	23	
	$(\frac{TR}{Y})$		(2.75)[a]	(1.71)[b]				semi-log
1967-79		-56.44	9.35	9.09	0.86	2.03	10	
			(4.47)[a]	(2.60)[a]				
1954-79		-0.21	0.54	0.24	0.65	2.43	23	
	$\text{Log}(\frac{TR}{Y})$		(2.77)[a]	(2.21)[b]				log-log
1967-79		-0.77	0.48	0.41	0.86	1.97	10	
			(4.51)[a]	(2.31)[b]				

Note : (i) Figures in parenthesis represent t-value

a Significant at 1% level; b Significant at the 5% level

monetization variable a significant one. This is based on the assumption that a relevant aspect of taxable capacity is the percentage of the population that handles money, since it is generally feasible to tax only persons who can pay in money[29].

As was indicated earlier, the tax capacity calculated represent the minimum taxable capacity in the economy given its main characteristics. It is also possible to calculate a tax effort index which serves as an indicator for comparison purposes. While the expected tax ratio represent tax capacity, the tax effort is defined as the extent to which this tax capacity is being used, i.e. Taxable capacity is $\frac{\hat{T}}{Y}$ and Tax effort

$$E = \frac{T}{Y} / \frac{\hat{T}}{Y}$$

29. Lotz and Morss, op.cit., p.330

Accordingly, for comparison purposes with other developing countries, a tax effort index for Jordan was calculated utilizing a model used for a number of other developing countries on a cross-country basis. Since indices for other countries were calculated on the basis of available data for the period 1969-71, the Jordanian data for the same period was used in order to ensure consistency. While it is recognized that the tax levels in those countries may have changed since then, however for comparison purposes the calculated index was used.

The model used for the cross-country analysis incorporates per capita non-export income, the percentage share of mining in GDP, and the percentage share of non-mineral exports in GNP as explanatory variables*.

Table 6.4 reports the actual tax ratios and tax effort indices of a sample of 13 countries. The data indicates that while Jordan was ranked sixth in terms of its actual tax ratio however, by way of its tax effort index it ranked ninth in the same group. While one may infer from such comparison that Jordan may have made a better effort as compared to the rest of the group of developing countries, however such inference must be taken with caution.

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* The derived equation reads as follows:

$$\frac{T}{Y} = 10.05 + 0.0031\ (Y_p - X_p) + 0.3973\ N_Y + 0.0881\ X'_Y$$

$$(7.84) \quad (0.77) \qquad (5.55) \qquad (1.89)$$

$$\bar{R}^2 = 0.39 \quad \text{where,}$$

$\frac{T}{Y}$ = tax ratio; Y_p = Per capita income; N_Y = the share of mining in GDP; and X'_Y = the export ratio excluding mineral exports.

Source: R. Chelliah, et. al., op. cit.

Such conclusions are subject to many constraints, one of which is that one may question whether the determinants of tax ratios are the same for all countries involved and whether for example such an exercise takes into consideration the particular structure and development of each country taken separately.

However, this is in fact an indicative measure of the level of tax effort in each country as compared to the rest of the group.

Looking back at the results of this exercise in the particular case of Jordan utilizing time series data over time, the significance of knowing the determinants of tax ratio for Jordan may have some reflections on future decision making. The finding that import ratio was the main determinant of tax ratio in Jordan if coupled with the analysis in the next section may have some policy relevance. If Jordan is to further its orientation towards import-substitution industries, then the composition of the tax system may have to be examined in the sense that attention has to be given towards more reliance on internal taxes in coordination with import duties.

Table (6.4) Selected Developing Countries Tax Ratio and Indices of Tax Effort, 1969-1971

Country	Taxes as % of GNP	Index of Tax Effort, 69-71 [a]
Guyana	23.9	1.059
Tunisia	21.7	1.639
Ivory Coast	19.8	1.471
Sudan	18.2	1.440
Morocco	17.8	1.224
Jordan [b]	16.8	1.240
Ghana	15.8	1.154
Korea	15.4	1.181
Ecuador	13.4	1.002
Colombia	12.5	0.901
Honduras	11.3	0.800
Lebanon	11.2	0.782
Paraguay	10.9	0.867

Source : Raja J. Chelliah, H.J. Bass and M.R. Kelley, "Tax Ratios and Tax Effort in Developing Countries, 1969-71", IMF Staff Papers, 1975, vol. 22, Table 1.

a Ranked according to tax ratios for the period 1969-71.

b Calculated according to the equation used for other countries.

This in fact confirms our analysis in the previous chapters on the tax mix. It was perhaps interesting to find that the mining, manufacturing and quarrying sector was not 'statistically' significant in explaining tax capacity, a finding which was different from that of earlier studies on inter-country data. This may be explained, in the particular case of Jordan, by the fact that it was only relatively recently that this sector started an upward trend as its contribution to gross domestic product. A new growing manufacturing sector was granted a wide range of tax concessions. Although it may be argued that such concessions are a pre-condition or a necessary measure for the growth in the industrial sector, yet there are many instances in which the wisdom of extending such tax-free situation far too long could be questioned either on the basis of efficiency within manufacturing itself, or in terms of its implications to the governments' revenues. These policy implications are more relevant, as was indicated, to the future instability of government revenues which is a characteristic of most developing countries. In what follows we provide empirical knowledge of the nature of instability of various sources of government revenues.

6.3 Revenue Instability

The previous statistical results raised the question of revenue instability indirectly. Such an issue is important to policy makers and planners in identifying the areas of revenue disruptions due to revenue instability. This identification would, among other things, allow for policy implications to be taken into consideration in the provisions of government expenditures. For one thing, a steady and reliable provision of public expenditures is to a large extent dependant on an equally steady flow of public funds.

Jordanian planners have so far been concerned about instability in foreign resources. While they realized the importance of limited domestic resources, the implications of an equal instability in government

domestic resources, though limited in nature, has not been addressed yet.

The structural factors discussed in this chapter alongside many others such as tax rates, rate structure, tax bases, tax concessions and so forth, result in yield fluctuation. Accordingly, it seems rather obvious that any measure used measuring revenue instability is of the nature of total derivative since it describes the summary influence on revenue yields of all factors.

6.3.1. Defining the Measure of Instability

There has been a number of instability measures used in literature. Williams et al.,[30] for example applied an index defined as the inverse of the standard error of the natural log of tax revenue (R) regressed on time (t), to a number of states in the U.S. Other measures such as the log variance and variance of first differences were used and found inadequate.[31]

The measure of instability of revenues adopted here is the normalized coefficient of variations defined as:

$$I = \frac{(S)}{\bar{R}} \cdot 100 \qquad (1)$$

where, I = is the index of instability of the Jordanian revenues over the relevant period,

S = is the standard error of the estimated trend equation relating government revenue to time, and

$\bar{R}$ = is the mean revenue over the time period.

The choice of this index over others according to Idachaba, who has applied it in a similar context to that of Jordan, is dictated by three

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30. William V. Williams, et al. "The Stability, Growth and Stabilizing Influence of State Taxes", National Tax Journal, vol. 26, 2, June 1973.

31. See for example Idachaba, F.S., "Export Instability in African International Trade", West African Journal of Agricultural Economics, vol. 2, No.1, 1973; See also M. Michaely, Concentration in International Trade. Amsterdam, North-Holland Publishing Co., (1962).

considerations[32]: First, a measure of instability of revenues should correct for trend. Second, developing countries do not have annual plans, rather they have medium term plans of three or five years, as is the case in Jordan. They are therefore concerned with revenue instability problems from a medium term point of view; and finally medium term fiscal equilibrium, stemming from a strong and steady secular upward trend in certain provisions of expenditures, is the basis for concern with medium term revenue instability.

6.3.2. Empirical Results

The linear trend equation (2) was estimated, using data for the various sources of revenue accruing to the Jordanian Government over the period 1967-1979[33].

$$R_j = \alpha + BT \qquad (2)$$

where,

R_j = is revenue from the j^{th} source, and

T = is the trend variable.

From equation (2) above, the standard error was taken as well as the mean revenue of each tax for the period under consideration. Table (6.5) presents the estimated indices of instability.

From Table (6.5), the instability indices range from a low of 8.50% for revenue from excise duties to a high of 70.37 of revenue from post, telg. and telephone. Except for the index for post and telephones, the evidence is consistent with our expectations. Normally, one does not expect significant changes in post; telegraphs and telephone revenues,

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32. F.S. Idachaba, "Revenue Instability in Developing Countries : The Ghanian Experience", Public Finance, vol.30, 1975.

33. The choice of the period was dictated by conceptual and practical reasons. Conceptually, this period excluded the interruptions of 1967 war on the one hand, and covered the implementation of two successive medium-term development plans. On the practical side, constraints by the availability of certain data were to be faced.

Table (6.5) Estimated Indices of Instability of Government Revenues, 1967-1979

Sources of Revenues	Instability Index I.%
(1) Customs Duties	49.07
(2) Excise Duties	8.50
(3) Fees	35.19
(4) Licences	33.99
(5) Additional Tax	25.15
(6) Income and Property Taxes	47.95
(7) Post; Telegraph and Telephone	70.37
(8) Interest and Profits	20.15
(9) Miscellaneous	34.10

however the results in the Jordanian case is consistent with a wide range and continuing changes in this area over the past ten years. Telephone network in particular witnessed no significant changes over a long period of time, however by the early seventies it was rather obvious that such a network in the telephone system needs complete modernization. To meet the considerable amount of investments necessary, the government resorted to very frequent changes in charges to meet the costs, which apparently were reflected in a high instability index. However, the main noticeable high indices are those of customs duties and income tax revenues of 49.07% and 47.95% respectively. These relatively high indexes are viewed with some concern because together they form the bulk of government revenues, and a high instability in their revenues must surely reflect on a similar instability in the total government domestic revenues. So far as the import duties index is concerned, it could possibly be explained by the changing structure of imports which is closely correlated to the industrial structure. To this must be added the ever widening range of exemptions, be it for purposes of the investment encouragement law or otherwise. By contrast the low excise

duty index of 8.50% is perhaps mainly due to two factors, that is, the limited coverage of the excise system of a few commodities on the one hand, and a low level of fluctuations in the production of those excisable commodities.

In order to see the average contribution of major sources of revenues to total revenues, these sources were regrouped in four major subcategories. First, the simple relative share of each sub-category were calculated by $(\frac{\bar{R}_j}{\bar{R}})$, whereby $\bar{R}_j$ is the mean of subcategory j during the period under consideration, and $\bar{R}$ is the mean of the overall revenues during the same period of time.

To compute the weighted contribution to instability of the four major sub-categories (W_j), the following formula was used, i.e.

$$W_j = \frac{(I_j \bar{R}_j)}{\sum_{j=1}^{k} I_j R_j} \qquad (1)$$

whereby, $I_j \bar{R}_j$ as defined above, and

$\sum_{j=1}^{k} I_j R_j$ is the computed average revenue instability of all sources of revenues.

The computed simple relative shares in total revenues and the weighted contributions to total instability of revenues major sub-categories for the period 1960-1979 are, in percentages:

Major Sub-categories	Simple Relative share	Weighted relative contribution to Total Instability
(1) Income and property tax	10.7	13.6
(2) Customs and Excise Ratios	45.4	48.0
(3) Fees, Licences and Add. Tax	19.6	16.8
(4) Other Revenues	24.3	21.6

The results above show that the simple relative share of income and property tax to total domestic revenue (10.7%) is less than its weighted relative contribution to total instability of 13.6%. This is probably due to the differences in taxes collected in arrears which contributes to the instability of income tax. It is not likely that property taxes have any influence because it represents only a very minor share in this sub-category. On the other hand, the data indicates that the major contributions to the overall revenue instability comes from customs and excise duties of about (48%). In view of the fact that these taxes form on the average about 45% of total domestic revenue, perhaps this result is to be expected. However, looking at the individual instability index one would expect that the main contributor to the overall weighted instability are customs duties due to reasons already alluded to above. The last two sub-categories comprising fees, licences, additional tax and other revenues, both contribute less than their average share in total domestic revenues. In fact this result was not something to be expected because one is inclined to think that such categories are in general subject to changes and may possibly be of significance to contribute to the overall instability. All in all, the results are interesting in the sense that they point clearly to the fact that the main categories in total domestic revenues, namely customs and excise as well as income tax contribute most to the overall instability of total domestic revenues. Such empirical knowledge on the degrees of instability of various sources of revenue may prove useful to planners and policy makers for future policy planning in Jordan.

6.4 Concluding Remarks

The results in this chapter showed that the government revenue shares are determined mainly by the import ratio, and this was manifested in similar conclusions as to the source of revenue instability. These

results might have medium and long-term implications concerning the composition of the tax system. Taking into consideration the current medium-term economic strategy in which the government is embarking upon a wide ranging program of import-substituting industries, consideration should be given to its effects on the tax mix and accordingly the implications to the government revenue yields. Particularly important is the possibility of transforming the structure of imports in favour of capital and raw material goods, on which little taxes are levied, if any, against consumption goods. This in turn has its repercussion on the ability of government in generating more revenues or even maintaining their present rates of growth. The pursuit of development strategy and the fulfilment of its goals may need a fresh look into the tax system with particular emphasis on coordinating the excise system with customs duties on the one hand, and a more rigorous implementation of the laws concerning direct taxes on the other hand.

CHAPTER SEVEN

DEFICIT FINANCING AND MONETARY DEVELOPMENTS

Our analysis in the previous chapters indicated that in spite of large amounts of grants augmenting governments' revenues, the overall growth of revenues was slower than that of public expenditures, particularly during the post-1967 period. Total government revenues, that is, domestic plus foreign grants, were not enough to finance the increasing level of expenditure and therefore the government has had to use various types of borrowing to fill the gap. Our interest in this chapter lies in examining the significance of deficit financing through an inquiry into the sources of financing, particularly domestic borrowing. This is then related to its implications on domestic liquidity in the economy. Finally, a brief account of the governments monetary measures taken during the period under consideration as a means of economic stabilization is given.

7.1 The Significance of Deficit Financing

The analysis in this chapter focuses attention on the post 1967 period. This is because it was only during this period that the government resorted to deficit financing, particularly domestic borrowing, to finance its expenditures. As was said earlier, public sector borrowing was mainly due to budget difficulties characterized by the failure on the part of the government to increase domestic revenues accompanied by a sharp rise in expenditures particularly after 1967 as Table 7.1 demonstrates. Since then, a fast rising current domestic deficit took place which shows that domestically generated revenues were not enough to cover a reasonable share of current expenditures. The government was aware of this situation and following several recommendations in successive development plans, some effort was taken to increase the share

Table (7.1) Budgetary Operations of the Central Government, 1967-1979
(In millions of JD's)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
I. Revenues and grants	66.6	70.9	65.7	71.2	87.4	89.6	120.9	183.2	173.8	264.5	240.2	398.2
1. Revenues	26.4	32.5	30.3	35.8	42.9	46.0	65.2	82.6	107.6	142.3	158.5	187.9
2. External Grants	40.2	38.4	35.4	35.4	44.5	43.6	57.7	100.6	66.2	122.2	81.7	210.3
II. Expenditures	79.9	88.4	80.7	83.2	105.9	119.5	146.6	204.9	262.5	337.8	332.7	495.6
1. Current	60.5	65.2	59.0	60.7	70.3	78.6	103.6	125.7	185.9	195.6	211.1	291.5
2. Capital	19.4	23.2	21.7	22.5	34.6	40.9	43.0	79.2	76.6	142.2	121.6	204.1
III. Current Domestic Deficit (I.1 - II.1)	-34.1	-32.7	-29.7	124.9	-27.4	-32.6	-40.4	-43.1	-78.3	-53.3	-52.6	-103.6
IV. Overall Deficit (-) or Surplus (+)	-13.3	-17.5	-15.0	-12.0	-18.5	-29.9	-25.7	-21.7	-88.7	-73.3	-92.5	-97.4

Source: (i) Central Bank of Jordan, Monthly Statistical Bulletin, various issues
(ii) See also references to Appendix Table (4) and Table (12)

of domestic revenues in current expenditures which increased from only 44% in 1968 to about 64% in 1979. This change has taken place against the background of increasing domestic revenues faster than that of current expenditures. For example, while current expenditures grew, on an average, by about 16% per annum during the period 1968-1969, domestic revenues grew by 20%. However, due to the fact that traditionally current expenditures outpaced revenues in absolute terms, the faster rate of growth in revenues was not enough to significantly close the gap. This current deficit in budgetary resources has always been met by the inflow of foreign grants. The balance over current deficit covers part of development expenditures. Prior to 1967 foreign grants and loans were sufficient to finance the budgetary deficits and even in some years there were small surpluses. In 1968, however, government expenditure went up by over 20% compared to that of 1967 (see chapter three) and government revenues did not keep pace with at least a similar rate of growth. Therefore budget deficits started a steady increase immediately after 1967 which amounted to about 17% of total expenditures in 1968 and 20% in 1969. The current deficit even widened and showed its biggest jump in 1975-1976 period. This jump occurred for two different reasons. On the one hand, following the inflationary pressures which started in 1972 the government was compelled to significantly increase the public sector wages and salaries bill and indulged in a program of subsidizing food items and petrol products, which in turn increased its current expenditures. On the other hand, a sharp drop in foreign grants in 1976 took place. Both reasons taken together resulted in suddenly increasing the overall budget deficit from only JD 25.7 million in 1974 to JD 88.7 million in 1976.

In order to assess the implications of deficit financing both the sources and composition of financing are important since each source has a different impact on the economy. Broadly speaking, when the major sources

of financing are considered, it appears that, on average, foreign sources are as important as domestic sources.

As for foreign loans, their inflow appear to correlate to the soundness of the economy and political stability not only in Jordan but in the whole region as well. This is apparent if one notices that the net utilization of foreign loans were minimal at best during the internal disturbances in 1969 and 1970 which amounted to JD 3.8 and JD 1.5 million respectively. This in turn financed about 21% and 10% of budget deficits during the same years. However, following the launching of the Three Year Development Plan 1973-75 and the increased international confidence in the economy, the share of foreign loans in financing governments budget deficit increased to almost matching that of domestic sources, amounting to about 44% by 1979, Table 7.3.

This increase in government foreign borrowing is manifested in a steady growth in debt outstanding. On the one hand, total government debt outstanding increased considerably during the seventies. For example, between 1969 and 1979, government debt rose, in absolute terms, from JD 39.9 million to JD 233.7 million registering the highest rate of growth ever, of about 30% annually during the period 1975-1979, on average. An important feature of this growth is the fact that at the closing period of this study the government seems to have increased its borrowing from foreign banks and commercial companies, which increased from JD 2.3 million in 1969 to JD 21.6 million by 1979 or about 9% of its total outstanding debt[1]. As Table (7.2) demonstrates, the ratio of annual debt outstanding to GNP, which is one of the criteria usually employed as a measure of indebtedness, has been increasing during the 1970's from only 1.3% in 1969 to 9.7% in 1977, yet dropped to 7.1% by 1979.

While the level of indebtedness itself is of considerable importance,

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1. For details on the composition of foreign public debt, data is provided in Appendix Table (14).

Table (7.2) Debt Outstanding, Debt Service and Their Ratios to GNP

Year	Debt Outstanding			Debt Service			
	Accumulated Debt (millions)	Annual Rate of growth %	% to GNP	Abs. in (millions)	% of GNP	% of GDP	% of Export Earnings
1969	39.9	5.6	1.3	1.22	0.70	0.6	8.3
1970	41.8	4.8	1.0	1.64	1.80	0.9	13.5
1971	49.6	18.7	3.9	2.53	1.00	1.36	22.1
1972	61.2	23.4	5.2	3.05	1.38	1.47	17.9
1973	68.3	11.6	2.9	5.99	2.50	2.74	31.6
1974	79.8	16.8	4.1	4.69	1.68	1.89	9.4
1975	108.0	35.3	8.2	6.26	1.80	2.25	12.8
1976	132.6	22.8	4.5	8.25	1.50	2.05	12.0
1977	193.1	45.6	9.7	12.05	1.60	2.5	14.7
1978	244.1	26.1	7.0	14.11	2.00	2.4	15.5
1979	306.3	25.5	7.1	28.33	3.30	4.0	23.4

Sources: (i) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 17, No.5 May 1981; vol. 15, No. 10, Oct. 1979; and vol. 11, No.4, April 1975

(ii) Appendix Table No. (3)

debt servicing is of immediate concern due to its implications towards increasing the budget deficits and the outflow of capital. As early as 1960 economists predicted that debt servicing obligations for developing countries would rise. One reason given for this rise was the expiration of the grace period on development loans received during the early sixties[2]. This is confirmed by recent statistics. For example, total LDC's debt service rose from US $6.2 billion in 1967 to reach US $32.0 by the end of 1976[3].

Jordan in that respect is no exception in which debt servicing, that is, repayments of principals and interests showed a noticeable increase as of 1973 and has been increasing rapidly since then in absolute terms to reach a record high of JD 28.33 million in 1979. While debt servicing still forms a relatively small fraction of GNP, i.e. 3.3% in 1979, yet more importantly the ratio to export earnings of foreign exchange peaked in 1973 to reach about 32%. In spite of the fact that the increase in export earnings resulted in a drop in the ratio of debt service/export earning to 23% by 1979, however such a ratio is still considered a rather high one by other developing countries standards and is expected to further increase once the grace period of loans contracted during the late sixties ends.

As for domestic borrowing, the forms of borrowing currently in use are not different from those used by governments elsewhere in the world. Short-term borrowing takes the form of treasury bills and Central Bank advances, while long and medium-term borrowing are undertaken through the issue of bonds. The latter source is usually augmented in developing countries by the sale of non-negotiable savings certificates, the use of provident fund contributions of government employees and the

2. See for example Dragoslav Avramovic, et al. Debt Servicing Capacity and Post War International Indebtedness (Baltimore: John Hopkins Press, 1958); Also see D. Avramovic, et al. Economic Growth and External Debt (Baltimore : John Hopkins press, 1966).

3. OECD, Observer, No. 90, July 1978.

acceptance of savings deposits by the Post Office or Government Savings Banks[4]. While some of these instruments are available in Jordan, such as the Pension Fund and Post Office Savings Fund, however the difference lies in the way in which such funds are channelled to the public sector. While in some countries such as India and Pakistan, they are directly taken into the budget, in Jordan they are partly invested in government bonds and partly in other productive investments. Therefore, practically the internal sources of finance are comprized of the utilization of the banking system and that of the sale of treasury bills and government bonds.

As was alluded to earlier, the government was compelled to make use of the Public Debt Law No. 96 of 1966, which was introduced following a recommendation by the Seven Year Programme for Economic Development (1963-1970). The planners at the time assumed that "A modest national debt owed to the citizens of Jordan should not be regarded as undesirable, in fact it is much more desirable than having foreign debts of similar size"[5]. In order to ensure that internal borrowing be compatible with the above statement, there are certain statutory restrictions, that temporary "ways and means" advances from the Central Bank may not exceed 10% of the average annual domestic receipts collected during the preceding three years and these advances may not be extended for more than 300 days during a fiscal year; and the limit of outstanding government bonds may not exceed 15% of the average annual domestic receipts collected during the previous three years. However, realizing the need to increase the issue of bonds, the government in 1969 increased the limit on bonds outstanding to 25% of the currency in circulation or 25% of the average annual domestic receipts whichever was higher, with a ceiling on any issue of

4. UN, "Findings of the Seminar on Problems of Economic Development: Financing Public Sector Investment", Economic Bulletin for Asia and the Far East", vol.19, No.2, Sept. 1968, p.18.

5. Jordan Development Board, op.cit., p.25.

bonds in any one year of JD 8.0 million, which was increased to JD 32.0 million in 1978[6].

Issues of Treasury bills commenced in 1969 which amounted to JD 8.4 million, however continued increasing rapidly reaching JD 58.00 million by the end of 1979. Despite the early increase of sales of Treasury bills, the budget continued to be in substantial deficit, particularly after the internal disturbances of 1970. Government bonds were then introduced in early 1971, the first issue of which amounted to JD 3.0 million in 1971 with a maturity of four years, and an interest rate of 7.0%. Both sources together were not enough to cover the budget deficit, therefore recourse to advances from the Central Bank also grew rapidly, increasing from only JD 0.3 million in 1969 to a record high of JD 37.2 million and JD 25.4 million in 1978 and 1979 respectively, Table (7.3).

The Central Government's total internal debt has increased substantially over the period under consideration and stood at JD 139.4 million by the end of 1979, (20%) of GDP. The composition of domestic public debt is of particular importance, because each source has different implications to the economy. This composition has changed in recent years reflecting the government's policy of promoting the issue of longer-term instruments and encouraging non-bank placement. Nevertheless, Treasury bills held almost entirely by the banking system, and accounted for almost half of the total in 1974, however, this ratio decreased relatively to 37% by 1979. Treasury bills have a maturity of three months. Government bonds maturing in four to seven years were increasingly gaining acceptance, accounting for 40% of total domestic debt in 1979. The government has made particular efforts to place these issues with non-bank holders. Since 1973, it has been offering a preferential interest rate of 7.5% to private holders combined with a lottery feature,

6. For details see, Central Bank of Jordan, Public Debt Law No. 69 of 1966, Article (4.b). (Amman : 1971); see also IMF, "Jordan - Recent Economic Development", Doc. (SM/73/207), August 1973.

Table (7.3) The Composition of Internal Public Debt, 1969-1979
(in millions of JD's)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total Domestic Borrowing (I + II + III).	8.70	14.30	31.40	40.65	53.3	55.97	65.40	87.30	107.80	135.20	139.40
I. Treasury Bills[a]	8.40	12.60	21.00	20.25	23.00	28.00	29.00	35.00	38.00	49.00	58.00
I.1 Central Banks	4.00	8.29	12.75	5.04	8.30	15.80	9.45	18.36	15.00	1.02	10.90
I.2 Commercial Banks	3.77	3.35	7.32	12.53	13.01	10.57	17.99	11.20	20.93	47.40	40.85
I.3 Other Holders	0.63	0.96	0.93	2.68	1.69	1.63	1.56	5.44	2.07	0.58	6.25
II. Government Bonds[a]	-	-	3.00	8.00	12.00	20.00	23.00	32.00	41.00	49.00	56.00
II.1 Central Bank	-	-	-	1.18	2.53	5.28	1.51	0.08	5.52	7.90	9.78
II.2 Commercial Banks	-	-	1.26	3.25	4.01	4.34	6.69	10.88	9.53	11.75	16.67
II.3 Other Holders	-	-	1.74	3.57	5.46	10.38	14.80	21.05	25.95	29.35	29.55
III. Advances from the Central Bank[b]	0.30	1.70	7.40	12.40	18.30	7.77	13.40	20.30	28.80	37.20	25.40
IV. The Share of the Banking System	7.77	13.34	28.73	34.40	46.15	43.46	49.04	60.81	79.78	105.27	103.65
V. Ratio of IV to Total (%)	0.89	0.93	0.91	0.84	0.86	0.78	0.75	0.70	0.74	0.78	0.74

Notes : (a) Issues of Treasury bills commenced in 1969 and Gov. bonds in 1971.

(b) Includes compensatory financing of JD 1.6 million in 1961 and JD 1.1 million in 1973, and SDR's allocations of JD 1.8 million in 1971 and JD 1.2 million in 1972.

Sources: (i) IMF "Jordan - Recent Economic Development", Doc(SM/78/34) Feb. 1978

(ii) CBJ, Monthly Statistical Bulletin, vol. 16, No.2, Feb. 1980.

(iii) CBJ, Statistics pertaining to some Aspects of the Jordanian Economy, 1974

Table (7.4) Sources of Government Deficit - Finance, 1969-1979
(in millions of JD's)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1. Net Utilization of Treasury Bills & Gov. Bonds	8.4	4.2	11.4	4.25	6.8	13.0	4.0	15.0	12.0	19.0	16.0
2. Net Utilization of the Banking System	0.3	1.4	5.7	5.0	18.3	8.0	13.4	20.3	28.8	77.2	25.4
3. Total Internal Sources	8.7	5.6	17.1	9.2	25.1	21.0	17.4	35.3	40.8	56.2	41.4
4. Net Utilization of Foreign Loans	3.8	1.5	7.8	11.6	7.1	11.4	12.0	22.5	31.8	41.6	45.9
5. Total Sources of Finance	12.5	7.1	24.9	20.8	32.2	32.4	29.4	57.8	72.6	97.8	87.3

Source: (i) Central Bank of Jordan, Monthly Statistical Bulletin, various issues
(ii) I.M.F., "Jordan - Recent Economic Developments, Sept. 1974.

compared to the 5.75% rate for the banking sector, both rates were increased by one half percentage point in 1975. As a result 53% of all bonds outstanding by the end of 1975 were held by non-bank holders. However, this should not conceal the fact that bonds held by the non-banking sector included less than 25% held by individuals, and the rest was held by institutions such as saving funds and specialized credit institutions. Overall, although the share of the banking sector in the total outstanding domestic debt decreased from its highest level of 91% in 1971 to 74% in 1979, yet for the banking sector to hold about three quarters of total domestic debt is no doubt a very high ratio, Table (7.3).

The above shows that no success has been achieved in selling government securities to the non-bank non-institutional investors. The question that may be asked here is whether it is really necessary to build up such a market for government securities and whether reliance on non-bank institutions in particular cannot be given more importance. Investment in government securities by such institutions could be regarded as indirect investment by the household sector. Moreover, these institutions are statutorily required, in most cases, to invest in specified proportion of their investible funds in government securities and consequently they buy them as an investment proposition irrespective of such consideration as yield and liquidity. Hence, given the need to keep down the cost of government borrowing, reliance on such institutions seems necessary as it obviates the need for the government to compete for funds by offering higher interest rates. For that, it seems reasonable for the government to increase the share of the non-bank institutions in holding securities. However, there is always a limit as to the ability of such institutions to absorb more government securities, beyond which the government has to compete in the market for the household' savings.

The extent of the impact of government borrowing on economic activity

stems from the inflationary potential of deficit financing. It is generally held that borrowing from the non-banking sector represents the diversion of genuine savings to the public sector; savings which otherwise may have been geared to consumption or other forms of investments. To the extent that borrowing from the non-banking sector results in a reduction in the current private sector purchasing power, then it would be non-inflationary. However, taking into consideration the interest differential, if the non-banking sector borrows from commercial banks and investing in government securities then this would not result in a reduction in purchasing power and would perhaps be inflationary. Borrowing from the Central Bank, of course, is a simple case of credit creation as it results in a net addition in purchasing power in the economy. On the one hand, as the government spends the proceeds of borrowing from the Central Bank, these accrue as additional income. On the other hand, the government by placing some or all of its borrowed money from the Central Bank in commercial banks increases the ability of the latter to give more credit advances as a result of increasing its cash base. Borrowing from the commercial banks is somewhat different because it creates earning assets for the private sector and liabilities for the government whereas this is not the case for the Central Bank, for it is part of the public sector. However, it is argued that both have similar effects on the real income of the private sector and should therefore be grouped with that of the Central Bank.

Whatever the source of borrowing, it is well to bear in mind that in considering the inflationary/non-inflationary potential of deficit financing the dividing line between the two as regards borrowing from the banking system is thin. Certainly there are a host of other factors which have to be taken into consideration, such as the growth rate of real output, income viability of monetary resources etc. before any concrete answer is to be given.

7.2 Monetary Developments and the Governments' Action

7.2.1 Monetary developments.

Having analysed the governments' deficit financing in section one, our attention is given in the present section to a review of the monetary developments after 1967 and the policy measures taken by the Central Bank as the main agent of the government.

It is generally argued that the main implication of deficit financing lies in its impact on domestic liquidity and hence on the role it may play in aggravating the price instability. However, this causal relationship may not always be the case, for one, the cause and effect relationship among such factors is so intertwined and such factors are interrelated so that it is hard to establish a straightforward causal effect.

However, during economic development, experience of developed countries shows that as their per capita incomes increase they experienced a more rapid growth in financial assets than in national wealth or national product[7]. Data on monetary development in Jordan during the period under review shows precisely that. As Table (7.4) shows money supply (M_2) increased substantially over the period under consideration and this growth could be subdivided into two separate periods. The first is that of 1967-1972 period during which this monetary growth was absorbed by the rapid growth in the economy as the figures on GNP shows. However, the picture has changed since then whereby monetary growth outpaced significantly that of the gross national product. This trend is clearly reflected in the ratio of money (M_2) to GNP which increased significantly in the second period to reach about 91% by 1979, while during the earlier period it stabilized between 65 and 66%. Now, these changes were reflected in a way in

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7. J.G. Gurely & E.S. Shaw, "Financial Structure and Economic Development", Economic Development and Cultural Change, vol. 15, No.3, 1967, pp. 257-65.

Table (7.5) Indexes of GNP, Money Supply (M_1), Prices and the Money/GNP Ratio, 1967-1980. (per cent)

Year	Indexes (1967 = 100)			M_2 to GNP Ratio[a]
	Consumer prices	GNP in Current prices	Money Supply (M_2)	
	1	2	3	4
1967	100.0	100.0	100.0	0.66
1968	99.7	116.8	105.5	0.65
1969	107.5	138.5	126.2	0.60
1970	114.8	131.2	137.2	0.69
1971	119.7	139.9	143.6	0.67
1972	129.4	155.1	155.7	0.66
1973	142.9	169.5	187.6	0.72
1974	171.5	196.0	230.3	0.77
1975	192.1	240.3	295.1	0.81
1976	214.2	380.7	381.4	0.66
1977	245.3	437.5	466.4	0.70
1978	262.4	501.1	644.7	0.84
1979	299.7	598.7	821.6	0.91

Sources: (i) Central Bank of Jordan, Monthly Bulletin, vol.8 No.12, Dec. 1972; vol.13, No.9, Sept. 1977 and vol. 17, No.6, June 1981.

(ii) See also Table (1.8) page 28.

Note: a For data on M_2 and GNP in absolute terms see ref (i) above and Appendix Table (1).

consumer price index which followed a similar pattern, hence as of 1972-1973 the first signs of the inflationary pressures were at work.

The composition of domestic liquidity has undergone a considerable change over the period under consideration. As for the components of narrowly defined money (M_1), there has been a tradition of public aversion towards demand deposits vis-a-vis currency, especially during periods of political instability. This is evident during the period of internal strife of 1969 and 1970 when currency components of money supply increased by 12% and 16% during the two years respectively. At the same time the currency to narrow money (M_1) ratio was as high as 78% in 1970. However since then this ratio has been dropping considerably to reach 59% by the end of 1980 with the ratio of demand deposits increasing significantly from 22% in 1970 to 41% by 1980. Also, the importance of time and saving deposits has been gaining ground : their ratio to broad money (M_2) increased from 19% in 1969 to 39% by the end of 1980[8].

There has equally been a change in the factors affecting domestic liquidity, that is, broad money (M_2) over the period under consideration. Based on the conventional analysis in terms of external and domestic credit factors, the expansion of liquidity prior to 1973 was mainly attributable to an increase in domestic credit, except for 1968. This domestic credit expansion was in turn a result of a considerable increase in net claims on the government. However, during the period 1973-1975, the expansion in liquidity was attributable, almost equally, to both external surplus and increase in credit to the private sector. The increase in credit to the private sector accelerated from 24% in 1973 to 44% in 1975 (Table 7.6); the major portion of this credit to the private sector was directed towards trade and real estate boom during that

8. For more detailed data on the components of money supply (M_1 and M_2) see Central Bank of Jordan, Monthly Bulletin, vol 17, No.6, June 1981.

Table (7.6) Factors Affecting Changes in Money Supply (Money & Quasi Money), 1968 - 1979.

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Changes in:												
Money and Quasi-Money (M_2)	14.74	10.0	10.3	6.0	11.4	29.6	40.7	61.0	81.3	80.1	158.3	166.6
Money (M_1)	12.74	8.2	9.2	2.5	7.0	24.2	31.0	48.3	45.1	51.2	55.7	95.1
Quasi-Money	2.0	1.8	1.1	3.5	4.4	5.4	9.7	12.7	36.2	28.9	102.6	71.5
Foreign Assets (net)	15.51	-10.9	-1.5	-11.8	6.8	12.5	6.8	50.2	17.1	71.1	48.2	63.4
Domestic Assets (net)	-0.78	20.9	11.8	17.8	4.6	17.1	33.9	10.8	64.2	9.0	110.1	103.2
Claims on the private sector	1.43	5.1	0.1	1.3	3.0	11.4	21.0	35.3	61.6	20.2	116.5	131.2
Claims on Public entities	0.76	-0.7	-0.1	0.4	1.2	1.4	3.2	2.5	5.8	3.3	21.5	2.2
Net claims on government	-0.83	18.6	12.2	18.1	5.4	7.4	-0.2	-7.2	13.4	5.7	17.8	-16.3
Other items (net)	-2.13	-2.1	-0.4	-2.0	-5.0	-3.1	9.9	-19.8	-16.6	-20.2	-45.7	-13.9
Changes in %												
Currency	-	12	16	1	-2	20	18	20	16	16	17	25
Money (M_1)	-	9	10	2	7	21	22	28	21	19	18	26
Money and Quasi-money (M_2)	16	9	9	5	8	20	23	28	29	22	36	28
Claims on Private Sector	4	14	-	3	7	24	35	44	53	17	36	42

Source: (i) IMF, "Jordan - Recent Economic Development", January, 1978, and September 1975

(ii) Central Bank of Jordan, Monthly Bulletin, vol. 17, No.3, March 1981.

(iii) Central Bank of Jordan, Annual Report, 1978 and 1979.

period which will be discussed briefly later in the chapter.

It is evident from this brief review of monetary developments that during the period under consideration, on average, the government was the more potent source of liquidity expansion. This was more so for example in 1975 and the years following 1977 during which the governments' surpluses increased considerably.

The increased liquidity in the economy was accompanied by price increases as well, and may have aggravated the inflationary pressures which were already apparent in Jordan. In the early post-war period price increases were relatively gradual. Since 1972 inflation accelerated significantly and remained in the 10-20% range. Clearly, as Table 7.7 shows, the largest pressure on the overall cost of living index came from increases in food stuff prices which reflect both imported inflation as well as domestic pressures. However, in the last few years of the 1970's clothing and other services had their share[9].

In the absence of a comprehensive fiscal policy to combat inflation, the authorities seem to consider inflation as essentially a monetary phenomena and therefore resorted to monetary policy in order to lessen its impact, at least in the short-run. In the rest of this section therefore we review the governments' action which was implemented by the Central Bank of Jordan as the governments' agent to influence liquidity in the market and therefore inflationary pressures.

7.2.2. Monetary Policy : The Credit Control

There are two analytical problems imbedded in monetary policy, that is, the ability of the monetary authority to control monetary variables on the one hand, and the choice of the operational target

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9. In 1975 the government felt that the then used bases for calculating the cost of living index resulted in inflating the price index, therefore both the weights given to the components as well as the base year were changed. The base year was changed from (1967=100) to (1975=100) on the grounds that the former year was an unstable year and hence unrepresenting.

Table (7.7) Cost of Living Index 1967-1980.
(1967 = 100)

Year	All items	Food stuffs	Housing	Clothing	Other (Goods & Services)
Weight	(100.0)	(35.0)	(32.0)	(12.1)	(20.6)
1967	100.0	100.0	100.0	100.0	100.0
1968	99.7	97.8	100.9	99.6	101.1
1969	107.5	118.8	101.2	101.3	101.4
1970	114.8	128.1	107.3	107.2	108.5
1971	119.7	136.1	111.3	112.4	109.9
1972	129.4	151.2	120.3	119.5	112.3
1973	142.9	179.7	125.0	133.1	124.1
1974	171.5	242.3	135.0	150.4	120.9
1975	192.1	279.9	141.4	160.5	140.4
1976	214.2	320.8	151.0	172.7	157.4
1977	245.3	366.7	162.3	223.6	186.5
1978	262.4	379.8	179.2	234.5	214.3
1979	299.7	401.9	230.2	289.7	249.8
1980	371.1	445.0	247.9	306.9	299.8

Note: : In 1975 the government changed both the base year from 1967 to 1975, as well as the weights of the components of the price index. Hence, figures for the years after 1975 are adjusted to the base year 1967 = 100.0

Source : (i) Central Bank of Jordan, Statistics Pertaining to some Aspects of the Jordanian Economy, Oct. 1974.

(ii) Central Bank of Jordan, Monthly Statistical Bulletin, (January 1978 and April 1981).

appropriate on the other. As far as the first is concerned, it is generally accepted that their is an interrelationship in the cause and effect between the monetary variables and the overall economic activity, and the main aggregates such as consumption, government spending, investment etc., a relationship which adds up to the problem of controlling monetary variables.

Secondly, the monetary authorities are often faced with a dilemma between long-run aim of smoothly operating financial markets and the need to achieve a restraining effect on private demand in the short run. Some measures related to credit controls, such as ceilings on various types of financial flows are effective in the latter sense. In Jordan, the emphasis of monetary policy seems to have taken into consideration the short-term restraining effects rather than the long-term one, hence credit controls lies at the heart of monetary policy.

Prior to 1974, the only instruments of monetary policy in use were the reserve ratio, liquidity ratio and the bank rate which had been fixed at 10%, 25% and 5% respectively. Since then with the Central Bank (CB) addressing itself mainly to controlling domestic credit, as inflationary pressures built up, it resorted first to a mild use of moral suasion to influence the commercial bank lending. Failing to achieve the desired results, then the (CB) moved on to use quantitative credit controls along with a built-in selectivity element. It instructed the commercial banks to limit the increase in their outstanding credit to 5% of the corresponding amount at the end of 1974, however excluding credit facilities extended to finance industrial, agricultural and public works projects aiming at the rechannelling of commercial banks investment into material producing sectors in the economy. These moves came against the background that between 1969 and 1973 for example, commercial bank credit facilities provided for the commerce and trade sector averaged about 41% of their total credit, while credit to the mining and industrial sector

averaged only 9.8% over the same period, Table (7.8). The (CB) followed this by raising the reserve ratio to 12% by August 1974[10].

These credit control policies were first introduced in the UK in 1955, however were resented by banks on the grounds that they were thought to harm banker-customer relationship on the one hand, and were blamed for damaging financial efficiency, hence were abandoned in 1971[11]. Similarly, the Central Bank of Jordan was in 1975 concerned about the possible dampening effect of these controls on economic growth. Therefore, by mid-1975 the credit of the commercial banks was allowed not to exceed 10% of its outstanding level at the end of the previous year. At the same time a credit/deposit ratio of 80% was introduced and liquidity ratio increased to 30%.

There is little doubt that the tightening of the controls on bank lending did effectively curtail expenditure, and the impact of the more stringent monetary measures was felt in 1976. Therefore, while maintaining the 10% ceiling on credit expansion, the credit/deposit ratio was reduced to 75%. At the same time, a minimum 1.5% interest rate was applied to commercial banks' loans and overdrafts. The banks-were also required to maintain with the (CB), over and above their cash reserves, a special deposit on their overdrafts. By the end of 1976, the reserve ratio on demand deposits was raised to 15%, while that on time deposits remained at 12%. By setting a ceiling to the growth of bank lending through the different measures, the authorities were able to exert some restraint on money supply without abandoning the policy of interest rate stabilization.

However, the impact of the persistent use of credit controls was manifested in the contraction in economic activity. With the significant decline in credit facilities, the CB changed course by 1977 to temporarily

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10. Central Bank of Jordan, Annual Report, 1974, p.33.

11. See for example Eric L. Furness, Money and Credit in Developing Africa, (London : Heinemann Educational Books Ltd, 1975). Part. Chapter 9 which discusses the limitations of monetary techniques in developing countries.

Table (7.8) Sectoral Distribution of Commercial Bank Credit, 1969-1980 (in millions of JD's)

Year	Agriculture		Mining and Industry		General Commerce and Trade		Other Sectors		Total
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	
1969	0.7	1.5	4.2	9.3	19.1	42.0	21.4	47.1	45.4
1970	0.6	1.3	4.7	10.3	16.9	37.1	23.3	51.2	45.5
1971	0.8	1.7	4.6	9.8	19.0	40.5	22.5	48.0	46.9
1972	0.80	1.6	4.7	9.4	21.5	42.9	23.4	46.1	50.6
1973	2.1	3.4	6.3	10.2	25.1	40.6	28.3	45.8	61.8
1974	3.8	4.5	10.5	12.5	30.3	36.1	39.4	46.9	84.0
1975	3.6	3.0	15.1	12.4	51.4	42.3	51.3	42.3	121.4
1976	5.2	2.8	22.1	12.1	81.6	44.4	74.8	40.7	183.7
1977	8.3	4.1	26.8	13.3	81.4	40.5	116.5	57.9	201.1
1978	12.7	3.8	38.3	11.5	100.5	30.2	181.7	54.5	332.8
1979	17.4	3.7	60.5	13.0	134.2	28.9	253.0	54.4	465.1
1980	12.7	3.1	73.1	13.0	167.0	29.6	306.6	54.4	563.9

Source: (i) Central Bank of Jordan Monthly Statistical Bulletin, vol. 17, No.6, June 1981, and vol. 13, No. 9, Sept. 1977, and vol. 8, No. 12, Dec. 1972.

Table (7.9) Interest Rates Structure in Jordan, selected years

	1969	1972	1974	1976	1979
Central Bank of Jordan					
Bank rate	5.25	5.0	5.0	5.0	5.0
Long-term advances	5.0	4.0	4.0	4.0	4.0
Short-term advances	5.0	5.0	5.0	5.0	5.0
Deposits subject to notice	4.5	3.0	3.0	3.0	3.0
Time	4.0	4.0	4.0	4.0	4.0
Commercial Banks					
Overdrafts	7.0	7.0	7.0	8.25	9.0
Loans	9.0	9.0	9.0	9.0	9.0
Demand deposits	4.0	4.0	4.0	5.5	5.5
Saving and time deposits	4.5	4.5	4.5	5.6	5.6
Time & subject to notice deposits	5.5	5.5	5.5	6.6	5.5-6.0
Specialized Credit Institutions					
Agricultural Credit Corp	6.0	6.0	6.0	7.0	7.0
Industrial Dev. Bank	7.0	7.0	7.0	7.0	7.0
Housing Corp.	5.0	5.0	5.0	5.0	5.0
Jordan Cooperative Org.	6.0	6.0	6.0	6.0	6.0
Municipalities & village fund	4-5.0	4-5.0	4-5.0	4-5.0	4-5.0
Housing Bank					
deposits	-	-	5-5.2	5-5.7	5-5.7
loans	-	-	7.5-9.0	7.5-9.0	7.5-9.0
Jordan Treasury Bills	5.16	4.9	4.9	4.9	4.0
Government Bonds	-	6.0	7.5**	7.5**	7.5**

* For residents, while for non-residents it was 10%

** With a lottery prize each six months of JD 10.000

Source : Central Bank of Jordan, Annual Reports, Relevant Years.

relaxing its policy. First, by abolishing the special 3% deposit and suspension of credit ceiling, and then by discontinuing the credit/deposit ratio, therefore giving the banks incentives to increase credit facilities. The same measures were continued to be in force throughout 1978[12].

The effects of the above measures on increasing credit facilities in the economy were realized by the early 1979, during which the increase in monetary indicators started an upward pressure on prices. Then the Central Bank resorted once again to its contractionary measures by re-introducing credit/deposit ratio of 70% which later in the year was decreased to 67.5%. On the other hand, the reserve ratio on demand deposits was increased by one percentage point to 16% and interest rates on banks' overdrafts and loans were increased to 9% to residents and 10% to non-residents[13].

While the stop-go policies were temporarily effective in restraining the growth of credit facilities in times of high liquidity in the economy, such policies failed to have the same effect on changing the direction of commercial banks credit from financing trade and land speculation to material producing sectors, namely, industry and agriculture. It should be mentioned however, that while the credit advanced to commerce and trade relatively decreased to about 30% by 1980 and that provided to the mining and manufacturing increased to about 13%. Yet this relative change was far less than what the authorities had wanted. More recently this issue was surfacing when the (CB) imposed compulsory investment requirements on commercial banks and investment companies in the country in a move to "redress the lack of banks' participation in financing development efforts"[14] The new regulations imposed were reported to include a 3% of total assets of the commercial banks to be invested

12. Central Bank of Jordan, Annual Report 1978, pp. 28-29
13. Central Bank of Jordan, Annual Report 1979, pp. 24-26.
14. As reported in the Financial Times, London, July 15, 1981.

in Treasury bills and a 3.5% in government or corporate bonds[15]. These measures will increase the banks portfolio of Treasury bills and bonds but by no means could ensure a real change in the direction of investment by the banks in favour of industrial and agricultural sectors.

Before ending this section, a note is warranted on the governments' attitude towards interests as part of an overall monetary policy. As we have indicated earlier, the government puts a ceiling on interest rates. This may have provided a desired stability in the structure of interest rates in times of high economic growth and no inflation. However, inflationary pressures resulted in reducing the real rate of return both on deposits and governments' internal debt. For example, while the nominal interest rate on savings in the commercial banks increased from 4.5% to 5.25% between 1972 and 1976 respectively, the real interest rates were negative and increased from -2.97% in 1972 to -8.72 in 1976[16]. As prices continue to rise, people learn to differentiate between the nominal vis-a-vis the real rate of return. The fall in the real rates of interest may divert investments from financial assets into real assets possibly into speculation of land and real estate.

The above analysis shows that without a sound fiscal policy to accompany monetary policy, the latter can only play a limited role. Without such a compatibility between fiscal and monetary policies to ensure stability in the economy, the dangers of a continuing inflationary pressure will always be there. While the credit control policy may be effective in the short-run, it nevertheless may not provide the long-run desired effect in light of the high liquidity in the economy;

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15. Ibid, p.3

16. A. Hindi and G. Afram "The High Interest Rates Policy in Developing Countries and the Possibility of its application in Jordan" an unpublished paper, Dec. 1977 (In Arabic). The real interest rates above were calculated using the formula, $(r = \frac{1+n}{1+v} - 1)$, where, r = real interest rate, n = nominal interest rate and v = cost of living index.

that currency comprises a major proportion of total money supply; the relatively underdeveloped financial market and the high liquidity of the commercial banks. Unless such policies are also combined with tapping savings other than those of the commercial banks with the aim of properly channelling such resources into material producing sectors in order to ensure an increase in the countrys' productive capacity, more government borrowing and increasing liquidity seems to be destined to reinforcing the price rises which was the phenomenon of the seventies.

CHAPTER EIGHT : CONCLUSION

This thesis has examined the structure and performance of the Jordanian tax system and public expenditures utilizing the theory and practice of public finance in developing countries. It also sought to see whether the fiscal system operations have been consistent with the macroeconomic objectives of the development strategy. While this chapter sets forth the main conclusions which emanated from the analysis, it nevertheless is not a substitute to the arguments presented in the text.

It should be clear, at the outset, that this study was constrained by the scarcity of data on government operations which certainly limited the analysis in many instances. It is my understanding also that perhaps this was a major reason in preventing many others from pursuing research in this field. Therefore, one implication of our research is that more serious attempts must be made towards data collection and efforts must be exerted to provide a continuous flow of information, not only for research purposes, but even to allow the government to conduct a proper fiscal policy. On the other hand, although local government in Jordan is still of minor importance as a result of centralization in decision making, this study would have been more complete had we been able to analyse local government operations.

Having these limitations in mind, it is worth noting that ever since the country was established, Jordan was subject to drastic changes resulting from political and military instability in the Middle East. Subsequently, economic and social development was subject to widespread disruptions and frequently was severely curtailed.

However, backed by an ever rising foreign resources inflow, Jordan managed not only to avert extreme hardships in numerous occasions but also to achieve an acknowledged rate of growth by the standards of other

developing countries. The fact remains that successive governments have failed to bring about the necessary conditions for a long-term sustained growth. This was perhaps a result of government policy, conditioned by the above factors, in which the long-term economic rationality has been sacrificed for the short-term economic solutions.

Having made the above general remarks, we shall in what follows summarize the main conclusions of our study.

(1) The government has increased its share of economic activity by vastly increasing public spending and hence increasing the level of bureaucracy. The growth of public expenditures over the period under consideration followed a somewhat different path before and after the 1967 war era. The rate of growth of public spending in the latter period out-paced that of the former significantly. In our quest for the determinants of government expenditure, it was clear that their behaviour was strongly associated with the stage of economic development as measured by per capita income. We also examined the "openness" hypothesis, in which the import ratio was an important factor, a result which is not surprising in an open economy such as that of Jordan. However, such determinants are of a long-term nature. Of a more immediate impact on a short-term basis, expenditures lagged - one year seems a significant determinant, and this may have economic as well as non-economic factors behind it, which have an important influence in shaping up the behaviour of public spending. This was more so in the post-1967 period during which a host of factors played a significant part in the growth of public spending. The rising inflation for one, seems to have its effects on over-stating public spending, and if coupled with the polulation changes, may explain the need for more public spending, for which past levels of expenditures are considered an indicator. Above all, it is perhaps the large foreign aid receipts which permitted the government to increase the level of public

spending. Without foreign aid public spending would not have reached its present levels.

Both political and military determinants have given priority to defence expenditures. Jordan's maintenance of a relatively sizeable defence establishment extracts a large portion of the budget, making the release of more resources for development objectives harder year after year. Clearly the level of defence expenditure largely affects the composition of government expenditures by virtue of the trade-off among the different components.

In the absence of any political and military upheavals for which the country is susceptible, there seems to be no reason as to why the Jordanian economy cannot continue to make short and medium-term growth. Any changes of this sort may bring nearer the possibility of a reduction or elimination of budget support, whose present level cannot possibly be maintained for ever, which would have grave economic and political consequences. An equivalent reduction in government revenues would have severe implications. For one thing, it would make it extremely hard for the government to function properly. In such a case a drastic cut in government expenditures may prove to be a must. The government may have to take one of two alternatives or both, that is, a reduction in the civil service or a drastic cut in the military establishments both of which are hard options. Even in the event of releasing military manpower to the rest of the economy needs a reasonable period of adjustment. Moreover, a drastic reduction in budget support will also lead to a similar reduction in foreign exchange availability with its consequences on an already strained balance of payments.

The above indicates the need for policy orientation towards a gradual expenditure restraint, so that the available domestically generated revenues are, at least, enough to cover all recurrent expenditures. This

should be viewed with a long-run prospect for the economy to adjust its foreign earnings and expenditure position to achieve ultimate independence of foreign aid. Certainly this may not be a separate action, but rather a part of a broadly based fiscal policy in which the tax system has a vital role.

(2) In the long-run, the fiscal system tends to be closely related to the industrial structure. A changing industrial structure need a parallel change in the revenue system, in particularly, the need arises to develop new means of raising revenues.

There is a basic revenue problem inherent in the development policies used by many developing countries, particularly relatively open economies such as that of Jordan's, where imports supply the largest portion of domestically used manufactured products. More often than not such countries depend on import duties and some times other domestic excise taxes on silimar goods for revenue raising purposes. As we have seen in the case of Jordan, these duties were often levied on mass consumption goods such as petroleum products, cigarettes and tobacco products, and other manufactured goods. Once the government embarks on import-substituting program there will quite likely be a loss of government revenue after import replacement occurs unless other direct taxes on domestic incomes generated by the new production coupled with the other indirect taxes on domestic production are sufficient enough to offset the loss of revenues. However, as part of investment encouragement and the process of reorientation of the economy towards industrialization, government grant tax holidays to domestic producers as well as keeping other domestic indirect taxes below import duties for protection purposes. In addition it is customary for developing countries to start import replacement in the consumer goods industries, which bear higher rates of import duties. As the import replacements occur the import composition changes in

favour of low duty items and therefore import duties per unit of import will fall.

This process of industrial structure change approximate that of Jordan. It is therefore imperative that the tax system be reformed in such a way that is compatible with the broadly based development strategy.

(3) The primary purpose of any reform in the tax system is to secure one which promotes the broad objectives of economic policy: a satisfactory rate of growth; internal and external economic stability and a broadly shared distribution of income and wealth.

A properly designed fiscal system may be directed towards enhancing economic growth in developing countries by providing enough resources for capital formation. Extra emphasis must be given to fiscal policy in developing countries in that respect as the market system fails to generate enough savings due to its own deficiencies and factors which inhibit its proper functioning such as for example high consumption patterns. Furthermore, while it has to provide resources for financing investment, tax policy must create a setting in which private investment will proceed efficiently. The corporate sector has a vital role to play as a good channel for private savings and as a means for securing a generally favourable change in business structure. However, excessive tax holidays and allowances, if not properly designed and administered, could be counter productive. They may not be enough to succeed in attracting investment and more importantly channelling such investments in areas which benefit the overall development effort, let alone the fact that they involve revenue loss to the government. Moreover, they may as well, in certain instances, lead to inefficiency in the economy if not again properly designed and constantly evaluated, setting criteria for granting such allowances is not in itself sufficient enough to ensure their proper and effective use, a follow up process of evaluation is

a must if the pre-set objectives are to be achieved.

On the other hand, the fact that developing countries in general have small open economies characterized by dependency on foreign markets either for few exports of primary products or to satisfy their needs of manufactuted goods and foodstuffs, make them prone to world market fluctuations and their destabilizing influences. If this coupled with their own domestic deficiencies which themselves produce domestic destablilising factors, then it seems rather obvious that a reasonably developed fiscal policy may serve as a stabilization device important enough to lessen the frequent and diversified destabilizing effects. Above all, given the fact that in most developing countries income and wealth distribution is unfairly based to benefit the upper income classes, fiscal policy assumes a very important role to play. Here fiscal policy may be used in such a way that while it serves the humanitarian interest in sharing economic well-being more equally, it also provides for efficiency interest in the form of incentives to the private sector as well as individuals to make their own contributions. Striking a balance between these two, sometimes, incompatible objectives may prove to be the challenge faces developing countries in general, and Jordan in particularm in securing a more equitable society.

(4) In Jordan, the income tax has failed to achieve any of its macroeconomic objectives. In particular it failed to make a significant contribution to government revenues despite the fact that the tax base has developed considerably.

Our analysis has shown that the bulk of income tax revenues come from shareholding companies. This may reflect two factors, that is, a considerable increase in the tax base of shareholding conpanies on the one hand, as well as the fact that this sector is sufficiently developed and organized which makes it easier to tax.

However, notwithstanding the obvious increase in the tax base in general in the economy, the vast majority of self-employed, traders; professions and the like are still not appropriately covered by the tax net. Their assessment poses a challenge to the Tax Department as they rarely keep audited books, and even when they do, they fail to produce enough information for assessment. Both tax avoidance and tax evasion are recognized as widespread phenomena in this sector. In spite of the fact that the law requires each and every taxpayer to fill in a tax return, only relatively minor percentage of taxpayers do, and the rest is left to the Tax Department with its meagre resources to follow up. If the tax is to be of any significance, then these two areas, namely the tax composition as well as tax evasion must be vigorously and seriously tackled.

(5) While the income tax law in Jordan rightly applies the global income concept, that is, pooling all income from different sources in a single total which is subject to a single progressive rate, it nevertheless limits the tax base by not including into the taxable income that part which originates outside the country. By doing so, the law exempts a large portion of the gross national product from income tax.. Such a limitation results in fact in that Jordanians working abroad completely escape the Jordanian tax on their incomes. This runs counter to both the ability-to-pay as well as the benefit principals, because these people and their dependants enjoy free education and health services etc., so that it is only reasonable to bring their incomes into the tax net on equal basis with others.

(6) The income tax law also treats the income of the taxpayers sympathetically in the range of allowances and excessive exemptions and deductions it grants. While some of these exemptions may be justifiable, yet the range of such exemptions as well as their effectiveness in achieving the

objectives sought after are disputable. For example, while the economic situation may permit some relief to be given to the civil service sector, however it is not justifiable on the premis that the tax is better enforced in the public sector than it is in the private sector. Such a situation must be corrected in bringing the tax into better enforcement in the private sector which may then negate the need for a 50% exemption for the former. This may affect the efficiency of the Tax Department which deals with about 90 thousand public sector employees annually which in turn produce relatively a minor share in the overall income tax revenues. Secondly, while it is recognized, as said before, that the corporate sector is an important one and has a positive role to play, however the excessive tax holidays effectiveness in their present form in achieving the objectives set forth is questionable. Therefore, it is strongly believed that this is an area which ought to be reviewed particularly in the absence of any follow-up measures to determine their economic and social contributions to society.

(7) There is a built-in bias in company taxes against small shareholders. The law considers the tax paid up by the company final and cannot be set-off against any tax from other sources of income. Had the law allowed the tax to be set-off and refunded, this would permit the dividends to be grossed up with other sources of income and taxed at the appropriate bracket with the tax paid by the company being credited to the taxpayer. Such a modification is necessary on equity grounds according to which the small shareholder would benefit and this may as well attract hesitant small savers to the market. Moreover, a better encouragement to investments may be added by shortening the period during which loss could be set-off. This may provide an incentive to capital intensive projects which involve high start-up capital. In addition, it seems more realistic to abandon the present straight-line approach to an accelerated form of

depreciation allowances. While such a move may prove to be a revenue loser in the short-run, however its advantages in terms of investment encouragement as well as a steady stream of revenues in the future may be more productive. Such moves may be considered in the context of reviewing the overall tax exemptions under the present investment encouragement laws.

(8) Property taxes still of a very minor importance even if only from a revenue standpoint. It is recognized that a better enforced land and building tax could prove to constitute a major step forward towards achieving a more equitable tax system. Moreover, such tax may provide the government with a lucrative source of revenues. The developments in the economy which took place during the 1970's in particular, necessitate a more frequent revaluation of annual rental values which incidentally took place for the last time back in 1967. Efforts should also be vigorously exerted to deal with the existence of a great deal of tax delinquency, even if it requires very harsh penalties to be introduced into the law..

(9) If the tax system is to be geared towards achieving a more equitable distribution of income and wealth, then taxing capital gains on both equity and economic grounds seems to be a must. Certainly there is no justification in taxing earned income and leaving aside unearned income in the form of capital gains. Their exclusion from the scope of taxation constitutes a serious discrimination in favour of a particular class of taxpayers against the rest of society. It is acknowledged that the real estate boom during the seventies in Jordan put a lot of strain on the overall development strategy. Steps to divert speculative funds into productive investments is a case in hand. Moreover, capital gains taxation, besides its effect on income and wealth redistribution could provide the government with a much needed source of revenues especially in the medium and long-term period. However, in the very short-term the

problem that may arise to the authorities is the phasing out of the land and building sales tax with the introduction of a capital gains tax. The former currently provide the government with an ample source of funds. Here two options are at hand. Firstly, abolishing the land and building sales tax altogether and instead introducing the proposed capital gains tax or, secondly, augmenting the former in the latter and gradually phasing it out. From both a practicality standpoint as well as its revenue consequences the second option seems more reasonable. This would ensure both modifying the tax system and at the same time ensuring a steady flow of revenues to the Treasury with the least effect on revenue stability.

Coupled with this, a death duty is another tax to be considered on equity grounds. While its introduction may positively add to achieving a more equitable tax system, yet taking the present available administration, efforts may be used for potentially more lucrative sources of revenues. Here it is believed that the equity criteria must yield to the administrative constraints.

(10) It is important for developing countries in general and Jordan in particular to have a tax system designed to be responsive to inflationary pressures, but one which makes sure to neutralize inflation besides being income-elastic. In other words the tax system should be responsive to change in money as well as real income, but leaves those whose real income has not changed with no more tax to pay because of the impact of inflation. The most important thing to ensure an automatic increase in tax revenues as income increases, is to have a tax structure whereby the marginal tax exceeds the average tax, in other words an income elasticity of tax revenues greater than unity. Also, in order to make the tax structure responsive to inflation, then most of the specific duty rates on a wide range of goods have to be changed to an ad valorem form, if the tax is to be responsive to price changes. On the other hand, tax allowances and

concession, which are widespread in Jordan, must be reconsidered in the light of the overall development and economic conditions. While the elasticities of both the income taxes as well as the rest of indirect taxes have been above unity, yet it is worth pointing out that the magnitudes of taxes started from a very low basis. To reiterate, while it is very important to secure an income-elastic tax system, it is equally important to secure one that is responsive to inflation. This is most important during periods of inflationary pressures when tax revenues lose much of their real value and fail to increase by a similar proportion to that of public spending.

(11) Exemptions from import duties should be reduced to the greatest extent possible. We have argued in Chapter Four in particular, that the use of tax holidays for investment incentives purposes has failed to produce the results expected. It led for example to an almost negligible increase in foreign investments in Jordan, and this is to some extent supported by the experience of other developing countries. Also, it failed considerably to redirect investments to deprived areas other than the Amman region. On the other hand, a re-examination of both the range of such exemptions as well as the institutions on the exemption list is needed. The wide ranging exemptions particularly granted to government and other public sector connected departments, if not properly checked, may lead to one of two possible repercussions or both. On the one hand, it is highly likely that it will lead to financial inefficiency which finds its way in an environment of rapid development of bureaucracy. Also, it may lead towards increasing such departments preference to imported goods instead of supporting locally produced ones.

(12) The study has shown that supplements to the main taxes are a feature of the Jordanian tax system. The simplification of the tax system is important for both the taxpayers as well as to administration.

The wide range of supplements to customs tariff should be integrated into the latter, particularly in light of the fact that the reasons originally behind such separations are no longer valid. Moreover, the surcharge known as the Social Services Tax must be integrated into the income tax. This may help simplify tax compliance as well as to simplify the process of administering taxes in order to enable the administration to focus its efforts on effective enforcement with lower administrative costs.

(13) If the present level of tax revenue is to be increased and maintained, then a new look into the ways and means of coordinating custom duties and other domestic taxes, particularly excises, is needed. In light of our argument in 3 above, it may prove desirable that greater reliance on internal taxes should gradually be introduced into the system. One area of clear need in the coordination process to be examined is luxury consumption which needs to be properly identified and separated from protection purposes.

(14) An overall perceived policy of licencing, protection and exemptions vis-a-vis ad hoc decision making is needed, if the long-run distortions, internal frictions and resource allocations among the various sectors of the economy are to be eliminated. While recognizing the existence of such consequences of government policy is important, however positive action in policy terms is much more important to create a healthy economy.

(15) While export taxes have several advantages particularly simple expediency, flexibility and political desirability, however keeping them at very low level in the early stages of industrialization is necessary in order to lessen their restrictive effect on the growth of the export sector. This seems more so in Jordan's case because of the need to stimulate export-orientated industries which need to be competitive particularly in neighbouring Arab countries. In view of Jordan's imbalance in its trade balance that desperately need the growth in export

it seems undesirable in the foreseeable future for the government to embark on a scheme of export taxation. However, the absence of export taxes must be foreseen in a wider context which involves the wide range of tax holidays in order to ensure higher efficiency. In the case of the phosphate export tax, it is believed that changing the form of the tax to an ad valorem one would be highly desirable because it will be more responsive to both price and demand conditions in the international market and would save the company a lot of hardship.

(16) The Excise system is still limited in coverage. Even with that in mind, only three products contributed the bulk of excise revenues. In view of the need for the mobilization of greater domestic revenue sources, coupled with the changing economic structure, the need arises for a wider coverage of the excise net. Equally important is the fact that at present the nature of the tax on various products is the source of some complaint. If the present excise taxes are to be more revenue productive, then the nature of most taxes may have to be changed into an ad valorem form. This may as well satisfy the equity criteria in many instances and the system will be more responsive to price rises.

(17) Excises on services and transactions, namely "fees and licences" are emerging as a potentially lucrative source of revenues. While it is thought that such potentiality must be further explored in the light of government services rendered to the public and their costs, however certain stamp duties may cause some harmful and disruptive effects on many economic activities as well as inconvenience to the public. Their seemed to be some overlapping in certain areas whereby a quite different tax is levied on the same transaction or services. Therefore, the abolition of the nuisance causing ones as well as the unification of the rest as best as possible would result in the ease of application; less administrative cost and better understanding on the part of the public.

A new tax on the rapidly expanding tourism business may be considered, and in view of the considerable increase in hotel capacity it may provide the government with ample source of revenues.

(18) Our analysis has shown that conclusions derived from cross-section data do not necessarily hold when time series data for a particular developing country is used. This is because the former may overlook many differences pertaining to the characteristics of a number of countries which do not necessarily appear in others, let alone the fact that most of the mentioned studies combined both developed and developing countries whose basic characteristics are different.

Using time series data in the case of Jordan, confirmed the above reservations whereby many of the variables considered in cross-country studies were tested on time-series data for Jordan and many of them were not statistically significant.

The fact that the import-ratio was highly significant in determining government revenue shares, while not surprising, have had serious implications for the future. This reinforced our conclusion that the tax system needs to be developed in line with the changing economic structure.

(19) The above finding was also reinforced in our analysis of the revenue instability in Jordan. It was found that apart from Tel. and Telg., import duties were the main contributer to such instability. Accordingly, any future policy must take this into consideration. So far the question of domestic revenue instability in Jordan has not been addressed. Certainly the measures suggested in this study, it is hoped, would contribute significantly towards more stabilization in government revenues. Government awareness of the existence of instability and its sources may well indicate the particular areas needing more attention.

(20) Unless the fast rising domestic deficit is checked, the government

risks a similar increase in the public sector borrowing requirement. Government domestic borrowing which is based mainly on Treasury bills and development bonds has a high liquidity element injected into the economy at a time when the main monetary policy objective is to check the high liquidity in the economy. Moreover, government foreign borrowing which at the closing years of this study contained a new element of borrowing from commercial banks may aggravate the level of deficit financing. With the lack of most of the necessary instruments of policy to control inflation, the continuous increase in deficit financing may as well aggravate the inflationary pressures which were the phenomenon of seventies. As we have indicated in the text credit control policy is only effective in the very short-run, however if the government is to embark upon a sensible stabilization program then coordinating both fiscal and monetary policies is vital. Without such coordination conflict in objectives as well as the means of reaching them may arise. It is perhaps necessary in that context that a fresh look into the interest rate structure is necessary bearing in mind the need to keep the costs of government borrowing down as much as possible.

It is hoped that policy recommendations pointed out in this study may prove to be of help in improving the performance and role of the fiscal system in Jordan. Naturally, unless detailed statistics are forthcoming, it is hard to think how a proper fiscal policy for Jordan could be designed and its implications to the economy could be properly assessed.

It was felt that areas like tax incidence and tax burden in particular need to be investigated. The tentative results on taxable capacity need to be improved and further investigation is needed. Moreover, the possible ways and means of coordinating custom duties and other indirect taxes may prove to be of utmost concern in the near

future hence detailed analysis in that area is also needed. The impact of fiscal policy on income and wealth redistribution is another area which lacks serious research. It would seem, from the arguments presented in this thesis that these areas of research are necessary to assess present as well as future policy implication on the development process of the Jordanian economy.

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STATISTICAL APPENDICES

TABLE (1) Total Resources and Their Uses, 1954-1975

Year	GDP (market prices)			Imports		Total Resources	Total Consumption			Gross Capital Formation				Exports		Total Uses
	Abs. (mn)	% of T.R.	% change	Abs. (mn)	% change	(mn)	Abs. (mn)	% of T.R.	% change	Abs. (mn)	% of T.R.	% of GDP	% change	Abs. (mn)	% of T.R.	(mn)
1954	51.3	72.2	-	19.8	27.8	71.1	59.1	83.1	-	5.9	8.3	11.5	-	6.1	8.1	71.1
1955	47.3	63.8	-7.8	26.8	36.2	74.1	61.7	83.3	2.4	6.1	8.2	12.9	3.4	7.3	9.9	74.1
1956	66.6	71.8	40.8	26.2	28.2	92.8	69.7	75.1	13.0	13.7	14.8	20.6	124.6	9.4	10.1	92.8
1957	67.5	67.5	1.2	32.4	32.5	99.8	79.8	80.0	14.5	9.3	9.3	13.8	-32.1	10.7	10.7	99.8
1958	75.5	67.5	12.0	36.7	32.5	111.9	92.8	82.9	16.3	8.2	7.3	10.9	-11.8	9.9	8.8	111.9
1959	93.5	68.3	23.8	43.4	31.7	136.9	112.6	82.3	21.3	12.4	9.1	13.3	51.2	11.8	8.6	136.8
1960	98.3	67.6	5.1	47.1	32.4	145.4	115.5	79.4	2.3	17.1	11.8	17.4	37.9	12.8	8.8	145.4
1961	120.1	72.0	22.2	46.6	28.0	166.7	130.7	78.4	13.2	19.0	11.4	15.8	11.1	16.9	10.2	166.7
1962	118.9	69.6	-10.0	51.8	30.3	170.7	131.4	77.0	5.4	20.2	11.8	17.0	6.3	19.1	11.2	170.7
1963	129.1	67.9	8.6	61.0	32.1	190.1	149.8	78.8	14.0	20.0	10.5	15.5	-10.0	20.4	10.7	190.2
1964	148.9	72.4	15.4	56.7	27.6	205.6	155.7	75.7	4.0	25.3	12.3	17.0	26.5	24.6	12.0	205.7
1965	167.6	72.5	12.5	63.5	27.5	231.1	174.8	75.7	12.2	27.8	12.0	16.6	9.9	28.6	12.4	231.2
1966	170.6	69.0	1.8	76.7	31.0	247.3	187.0	75.6	7.0	28.4	11.4	16.5	1.1	32.1	13.0	247.2
1967	131.2	68.6	-23.1	59.8	31.4	191.0	147.8	77.3	-21.0	22.4	11.7	17.0	-21.1	20.8	10.8	191.0
1968	156.1	67.9	18.9	73.6	32.1	229.7	183.3	79.7	24.0	27.5	11.9	17.6	22.8	18.9	8.2	229.7
1969	183.4	65.2	17.5	97.7	44.8	281.1	220.8	78.5	20.5	39.7	14.1	21.6	18.5	20.6	7.3	281.1
1970	174.4	69.4	-4.9	76.8	30.6	251.2	211.5	84.1	-4.2	22.1	8.7	12.6	-38.3	17.6	7.0	251.2
1971	186.2	67.6	6.7	88.9	32.4	275.1	222.1	80.7	5.0	35.2	12.7	18.9	45.9	17.8	6.4	275.1
1972	207.2	63.7	11.3	117.8	36.3	325.0	245.7	75.6	10.6	42.3	13.0	20.4	2.4	37.0	11.3	325.0
1973	218.3	61.5	5.4	136.4	38.5	354.7	263.1	74.1	7.1	39.2	11.0	17.9	-15.4	52.4	14.7	354.7
1974	247.3	55.7	13.3	196.1	44.3	443.4	297.5	67.0	13.1	65.6	14.7	26.5	33.6	80.3	18.1	443.4
1975	278.6	48.0	12.6	301.1	52.0	579.7	372.0	64.1	25.0	88.8	15.3	31.8	4.1	118.9	20.5	579.7
1976	366.2	46.4	31.4	422.0	55.6	788.2	456.0	57.8	22.6	150.2	19.0	41.0	24.2	182.0	23.0	788.2
1977	477.6	46.9	30.4	540.3	53.1	1017.9	573.4	56.3	31.5	202.5	19.8	42.3	4.2	242.0	23.7	1017.9
1978	569.1	48.4	19.2	605.6	51.6	1174.7	678.3	57.7	18.3	232.3	19.7	40.8	-5.0	264.1	22.4	1174.7
1979	685.2	47.3	20.4	763.0	52.7	1448.2	833.7	57.5	22.9	294.5	20.3	42.9	3.0	320.0	22.0	1448.2

Source - see over

Source : (i) R.S. Porter, Economic Trends in Jordan, Middle East Division Publications, Beirut, (July, 1961)

(ii) Department of Statistics, National Account Statistics, 1959-1967 (Amman, n.d.)

(iii) Department of Statistics, National Account Statistics, 1952-1976 (Amman, March, 1978)

(iv) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No.3, March 1980

TABLE (2) Government Expenditure at Current and Constant Prices, Implicit Index of Prices (1972=100), and Per Capita Expenditure, 1954-1979.

(in mn of JD's)

Year	Gov. Exp. in (Current prices)	Implied Index number of prices (1972=100)	Gov. Exp. in (Constant prices)	Per Capita Gov. Exp. (Current prices)	Per Capita Gov. Exp. (Constant prices)
1954	16.6	67	24.8	11.9	17.8
1955	17.6	67	26.3	12.2	18.3
1956	21.3	68	31.3	14.4	21.1
1957	23.9	69	34.6	15.6	22.6
1958	29.3	70	41.9	18.5	26.5
1959	30.7	71	43.2	18.7	26.3
1960	32.8	74	44.3	19.4	26.2
1961	33.0	75	44.0	19.3	25.7
1962	37.5	76	49.3	21.2	27.9
1963	39.4	77	51.2	21.6	28.1
1964	43.6	77	56.6	23.2	30.1
1965	47.0	78	60.3	24.1	30.9
1966	38.6	81	47.7	19.2	23.7
1967	68.1	82	83.0	62.2	75.9
1968	80.5	86	93.6	71.5	83.1
1969	88.4	87	101.6	55.3	63.5
1970	80.7	90	89.7	48.4	53.8
1971	83.1	95	87.5	48.2	50.8
1972	105.9	100	105.9	59.7	59.7
1973	119.5	113	105.8	65.3	57.8
1974	146.6	128	114.5	77.6	60.6
1975	204.9	145	141.3	107.8	74.4
1976	262.5	167	157.2	130.0	77.8
1977	337.8	207	163.2	158.6	76.6
1978	332.7	207	160.7	151.4	73.1
1979	495.6	207	239.4	218.5	105.6

Sources: (i) Central Bank of Jordan, Dept. of Economic Research. (Unpublished data).

(ii) Central Bank of Jordan, Monthly Statistical Bulletin, vol.14 # 4, (April 1978), and vol. 16, # 2, (Feb. 1980).

(iii) Dept. of Statistics, National Accounts in Jordan, 1952-1976 (Amman: Dept. of Stat. Press, March, 1978).

(iv) For Data on Population and their Sources. See Table ( ).

TABLE (3) Gross National Product, Gross Domestic Product, Per Capita G.N.P. (All in Current and Constant (1972) Prices), and Population, 1954-1979.

Year	Gross National Product		Gross Domestic Product		Population in millions	Per Capita G.N.P.	
	Current prices	Constant prices	Current prices	Constant prices		Current prices	Constant prices
1954	52.4	78.2	51.3	76.6	1.39	37.7	56.3
1955	49.8	74.3	47.3	70.6	1.44	34.6	51.6
1956	68.5	100.7	66.6	97.8	1.48	46.3	68.1
1957	70.1	101.6	67.5	97.8	1.53	45.8	66.4
1958	77.1	110.1	75.5	107.9	1.58	48.8	69.7
1959	99.1	139.6	93.5	131.7	1.64	60.4	85.1
1960	105.7	142.8	98.3	132.2	1.69	62.5	84.5
1961	127.1	169.5	120.1	161.1	1.71	74.3	99.1
1962	130.8	172.1	118.9	155.7	1.77	73.9	97.2
1963	173.6	225.5	129.1	168.1	1.82	75.6	123.9
1964	160.6	208.6	148.9	192.5	1.88	85.4	110.9
1965	180.5	231.4	167.6	213.8	1.95	92.6	118.7
1966	185.8	229.4	170.6	213.2	2.01	92.4	114.1
1967	142.5	173.8	131.2	160.1	1.094	130.3	158.8
1968	166.4	193.5	156.1	181.8	1.126	147.8	171.8
1969	197.4	226.9	183.4	210.7	1.600	123.4	141.8
1970	187.0	207.8	174.4	194.2	1.668	112.1	124.6
1971	199.4	209.9	186.2	196.2	1.723	115.7	121.8
1972	221.0	221.0	207.2	207.2	1.774	124.6	124.6
1973	241.5	213.7	218.3	193.8	1.831	131.9	116.7
1974	279.3	218.2	247.3	193.2	1.890	147.8	115.5
1975	342.5	236.2	278.6	191.9	1.900	180.3	124.3
1976	542.5	324.9	366.2	219.3	2.020	268.6	160.8
1977	623.5	301.2	477.6	230.5	2.130	292.7	141.4
1978	714.1	345.0	569.1	274.7	2.198	324.9	156.9
1979	853.2	412.2	685.2	330.7	2.268	376.2	181.7

Sources:
(i) Royal Scientific Society, Numerical Index for Population and Vital Statistics, (Amman: March 1979).
(ii) U.N., Statistical Yearbooks, 1960-1973. (New York: U.N. Publications, relevant years), 1954-1966.
(iii) Dept. of Statistics, Statistical Yearbooks, 1973. (Amman:1974).
(iv) Dept. of Statistics, National Accounts in Jordan, 1952-1976. (Amman: Dept. of Stat. Press, March, 1978).
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(vii) Dept. of Statistics, Statistical Yearbook, 1974. vol. 25 (Amman: 1974). Particularly notes to Table (1).

TABLE (4) Total Government Expenditures, Main Components by Economic Use and Their Percentages of Total, 1954-79.

(in mm's of JD's)

Year	Current Expenditure		Capital Expenditure		Total Gov. Expenditure	
	Abs.	%	Abs.	%	Abs.	%
1954	13.334	80.5	3.226	19.5	16.560	100.0
1955	14.872	84.3	2.761	15.7	17.633	100.0
1956	18.258	85.6	3.063	14.4	21.321	100.0
1957	19.558	82.0	4.300	18.0	23.858	100.0
1958	23.523	80.2	5.820	19.8	29.343	100.0
1959	25.904	84.4	4.797	15.6	30.701	100.0
1960	26.862	81.8	5.980	18.2	32.842	100.0
1961	28.045	85.0	4.937	15.0	32.982	100.0
1962	29.926	79.7	7.599	20.3	37.525	100.0
1963	33.193	84.4	6.154	15.6	39.347	100.0
1964	34.457	79.0	9.166	21.0	43.623	100.0
1965	35.810	76.2	11.178	23.8	46.988	100.0
1966	28.240	73.2	10.360	26.8	38.600	100.0
1967	44.651	65.5	23.496	34.5	68.147	100.0
1968	57.186	71.0	23.334	29.0	80.520	100.0
1969	65.231	73.8	23.170	26.2	88.401	100.0
1970	59.028	73.1	21.673	26.9	80.707	100.0
1971	60.706	73.0	22.439	27.0	83.145	100.0
1972	70.311	66.5	34.563	33.5	105.874	100.0
1973	78.608	65.8	40.903	34.2	119.511	100.0
1974	103.603	70.7	43.019	29.3	146.622	100.0
1975	125.692	61.4	79.172	38.6	204.864	100.0
1976	185.894	70.8	76.590	29.2	262.484	100.0
1977	195.587	57.9	142.252	42.1	337.839	100.0
1978	211.051	63.4	121.623	36.6	332.674	100.0
1979	291.496	58.8	204.089	41.2	495.585	100.0

Sources: (i) See notes to Table (2)

(ii) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 14, No.4, (April 1978)

(iii) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No.2 (February 1980).

TABLE (5) Shares of Current and Capital Expenditures (in current and constant 1972 prices) to G.N.P., 1954-1979

(Percentage)

Year	Share of Current Expenditure in G.N.P.		Share of Capital Expenditure in G.N.P.	
	Current prices	Constant prices	Current Prices	Constant prices
1954	25.4	38.0	6.2	9.2
1955	29.9	44.6	5.5	8.4
1956	26.7	39.3	4.5	6.7
1957	27.9	40.9	6.1	8.8
1958	30.5	43.6	7.6	10.8
1959	26.1	36.8	4.9	6.7
1960	25.4	34.4	5.7	7.7
1961	22.1	29.3	3.8	5.1
1962	22.9	30.0	5.8	7.6
1963	19.1	24.8	9.5	4.7
1964	21.5	27.9	5.7	7.4
1965	19.8	25.4	6.2	8.0
1966	15.2	18.7	5.6	6.6
1967	31.3	38.2	16.5	20.1
1968	34.4	40.0	14.0	16.3
1969	33.0	37.9	11.8	13.5
1970	31.6	35.1	11.6	12.9
1971	30.4	32.0	11.3	11.3
1972	31.8	31.8	15.6	15.6
1973	32.5	28.8	17.0	15.0
1974	37.1	29.0	15.4	12.0
1975	36.7	25.3	23.1	15.9
1976	34.3	20.5	14.1	8.4
1977	31.4	15.2	22.8	11.0
1978	29.6	14.3	17.0	8.2
1979	34.2	16.5	23.9	11.6

Source: Appendix tables (3) and (4).

TABLE (6) Government Current and Capital Expenditure in Current and Constant (1972) prices, 1954-79

(in mn JD's)

Year	Current Gov. Expenditures		Capital Gov. Expenditures	
	Current prices	Constant prices	Current prices	Constant prices
1954	13.3	19.9	3.2	4.8
1955	14.9	22.2	2.8	4.2
1956	18.3	26.9	3.1	4.6
1957	19.6	28.7	4.3	6.2
1958	23.5	33.6	5.8	8.3
1959	25.9	36.5	4.8	6.7
1960	26.9	36.4	6.0	8.1
1961	28.0	37.3	4.9	6.5
1962	29.9	39.3	7.6	10.0
1963	33.2	43.1	6.2	8.1
1964	34.5	44.8	9.2	11.9
1965	35.8	45.9	11.2	14.4
1966	28.2	34.8	10.4	12.3
1967	44.7	54.5	23.5	28.7
1968	57.2	66.5	23.3	27.1
1969	65.2	74.9	23.2	26.7
1970	59.0	65.6	21.7	24.1
1971	60.7	63.9	22.4	23.6
1972	70.3	70.3	34.6	34.6
1973	78.6	69.6	40.9	36.2
1974	103.6	80.9	43.0	33.6
1975	125.7	86.7	79.2	54.6
1976	185.9	111.3	76.6	45.7
1977	195.6	94.5	142.3	68.7
1978	211.1	102.0	121.6	58.7
1979	291.5	140.8	204.1	98.6

Source: Appendix Tables (2) and (4)

TABLE (7) Per Capita Current and Capital Expenditures in (Current and Constant 1972 prices) 1954-1979

(in JD's)

Year	Per capita Current Exp.		Per capital Capital Exp.	
	Current prices	Constant prices	Current prices	Constant prices
1954	9.7	14.3	2.3	3.5
1955	10.3	15.4	1.9	2.9
1956	12.4	18.2	2.1	3.1
1957	12.9	18.8	2.8	4.1
1958	14.9	21.3	3.7	5.3
1959	15.8	22.3	2.9	4.1
1960	15.9	21.5	3.6	4.8
1961	16.4	21.8	2.9	3.8
1962	16.9	22.2	4.3	5.7
1963	18.2	23.7	3.4	4.5
1964	18.4	23.8	4.9	6.3
1965	18.4	23.5	5.7	7.4
1966	14.0	27.1	5.2	6.1
1967	40.9	49.8	21.5	26.2
1968	50.8	59.1	20.7	24.1
1969	40.8	46.8	14.5	16.7
1970	35.4	39.3	13.0	14.4
1971	35.2	37.1	13.0	13.7
1972	39.6	39.6	19.5	19.5
1973	42.9	38.0	22.3	19.8
1974	54.8	42.8	22.8	17.8
1975	66.2	45.6	41.7	28.7
1976	92.0	55.1	37.9	22.6
1977	91.8	44.4	66.8	32.3
1978	96.0	46.4	55.3	26.7
1979	128.5	62.1	90.0	43.5

Source: Appendix Tables (2), (3) and (4).

TABLE (8) Functional Distribution of Government Expenditures and Percentage of Total Exp. 1954-1979

(in mn of JD's)

	General Services		Defence		Social Services		Economic Services	
	Abs.	%	Abs	%	Abs.	%	Abs.	%
1954	1.962	11.8	8.951	53.9	1.479	8.9	4.168	25.1
1955	2.035	11.5	9.355	53.1	1.731	9.8	4.514	25.6
1956	2.338	10.9	12.187	57.2	2.013	9.4	4.783	22.4
1957	2.611	10.9	11.781	49.2	2.440	10.2	7.026	29.3
1958	3.184	10.8	14.669	50.0	3.340	11.4	8.151	27.8
1959	3.566	11.6	15.822	51.5	4.335	14.2	6.958	22.6
1960	3.606	10.9	16.155	49.2	4.946	15.1	8.135	24.8
1961	3.698	11.2	16.420	49.8	4.103	12.4	8.761	26.8
1962	4.041	10.7	16.805	44.8	4.673	12.5	12.005	32.0
1963	4.577	11.6	18.569	47.2	5.100	13.0	11.101	28.1
1964	4.685	10.7	18.570	42.6	5.400	12.4	14.968	34.3
1965	5.280	11.2	18.770	39.9	6.210	13.2	16.728	35.5
1966*	4.501	11.6	14.374	37.2	5.660	14.7	14.065	36.4
1967	6.711	9.8	34.164	50.1	8.036	11.8	19.235	28.2
1968	7.241	8.9	35.165	43.7	8.096	10.0	30.018	37.2
1969	8.158	9.2	41.471	46.9	8.716	9.9	30.050	33.9
1970	8.479	10.5	33.070	41.0	10.217	12.7	28.941	35.8
1971	8.640	10.3	33.780	40.6	9.391	11.3	31.334	37.7
1972	10.099	9.5	39.250	37.1	9.661	9.1	46.864	44.2
1973	11.168	9.3	42.013	35.2	10.857	9.1	55.473	46.4
1974	13.200	9.0	44.475	30.3	18.373	12.5	70.574	48.1
1975	17.717	8.6	48.300	23.6	23.931	11.7	114.916	56.0
1976	20.133	7.6	93.336	35.6	31.659	12.1	117.356	44.7
1977	25.436	7.5	82.563	24.4	35.545	10.5	194.295	57.5
1978	29.926	8.9	88.641	26.6	42.033	12.5	172.074	51.7
1979	39.645	7.9	114.866	23.2	36.393	11.4	284.681	57.4

Notes Table (8) (see over)

NOTES TABLE (8)

(i) General Services: include the following:-

(a) Public Administration (expenditures of the Royal Court, Houses of Parliament, the Cabinet, Audit Commission, and Civil Service Commission); (b) Security and internal affairs (Public Security Forces, Ministry of Interior, Justice and Shari'a); (c) Ministry of International Affairs and (d) The Ministry of Culture and Information.

(ii) Defence: Ministry of Defence and Armed Forces.

(iii) Social Services, Ministry of Education, Health, Ministry of Social Affairs, Youth Care Organization, The Potable Water Authority and The Ministry of Reconstruction and Development.

(iv) Economic Services Includes:

(a) Ministry of Communication (b) Ministry of Transport, (c) The Telecommunication Corp. (d) The Civil Aviation Dept. (e) Ministry of Industry and Comm. (f) Ministry of Supply, (g) Ministry of Finance (h) National Planning Council, (i) Ministry of Public Works (j) Ministry of Agriculture (k) The Regional Corporation (l) Ministry of Municipal and Village Affairs (m) The Natural Resources Authority (n) The Dept. of Statistics.

Sources: (i) see notes to Table (2)

(ii) CBJ, Monthly Bulletin, vol. 14 ##4, (April, 1978) and vol. 16, ##2 (Feb. 1980).

(iii) Ministry of Finance, Annual Reports, various issues. *1966 nine months only.

Table (9) Government Expenditure by Function as a percentage of GNP, current prices, 1954-79

(Percentages)

Year	General Services	Defence	Social Services	Economic Services
1954	3.7	17.1	2.8	7.9
1955	4.0	18.7	3.4	9.0
1956	3.4	17.7	2.9	6.9
1957	3.7	16.8	3.4	10.0
1958	4.1	19.0	4.3	10.5
1959	3.5	15.9	4.3	7.0
1960	3.4	15.3	4.6	7.6
1961	2.9	12.9	3.2	6.8
1962	3.0	12.8	3.5	9.1
1963	2.6	10.6	2.9	6.3
1964	2.9	11.5	3.3	9.3
1965	2.9	10.3	3.4	9.2
1966*	2.4	7.7	3.0	7.5
1967	4.7	16.9	5.6	13.4
1968	4.3	21.1	4.8	18.0
1969	4.1	21.0	4.4	15.2
1970	4.5	17.6	5.4	15.4
1971	4.3	16.9	4.7	15.7
1972	4.5	17.7	4.5	21.2
1973	4.6	17.3	4.4	22.9
1974	4.7	15.9	6.5	25.2
1975	5.2	14.1	6.9	33.5
1976	3.7	17.2	5.8	21.6
1977	4.0	13.2	5.7	31.1
1978	4.1	12.4	5.8	24.0
1979	4.6	13.4	6.6	33.3

Source: Appendix table (3) and (8) *nine months only.

TABLE (10) Composition of General Services, 1954-79

(in million of JD's and % of Total)

Year	Public Administration		Security and Internal Affairs		International Affairs		Culture & Information Services		Total General Affairs	
	Abs.	%	Abs.	%	Abs	%	Abs.	%	Abs.	%
1954	0.166	8.4	1.569	79.9	0.144	7.3	0.083	4.2	1.962	100
1955	0.204	10.0	1.596	78.4	0.153	7.5	0.081	3.9	2.034	100
1956	0.298	12.7	1.723	73.6	0.196	8.3	0.121	5.1	2.338	100
1957	0.234	8.9	2.024	77.5	0.241	9.2	0.112	4.2	2.611	100
1958	0.294	9.2	2.473	77.5	0.241	7.5	0.176	5.5	3.184	100
1959	0.314	8.8	2.654	74.4	0.267	7.4	0.331	9.2	3.566	100
1960	0.323	8.9	2.669	74.0	0.288	7.9	0.326	9.0	3.606	100
1961	0.338	9.1	2.697	72.9	0.353	9.5	0.310	8.3	3.698	100
1962	0.361	8.9	2.753	68.1	0.538	13.3	0.389	9.6	4.041	100
1963	0.361	7.8	2.956	64.5	0.619	13.5	0.641	14.0	4.577	100
1964	0.384	8.1	3.011	64.2	0.654	13.9	0.636	13.5	4.685	100
1965	0.486	9.2	3.396	64.3	0.656	12.4	0.742	14.0	5.280	100
1966*	0.357	7.9	2.743	60.9	0.606	13.4	0.795	71.6	4.501	100
1967	0.454	6.7	4.383	65.3	0.771	11.4	1.103	16.4	6.711	100
1968	0.602	8.3	4.239	58.5	0.871	12.0	1.529	21.1	7.241	100
1969	0.616	7.5	4.691	57.5	0.964	11.8	1.887	23.1	8.158	100
1970	0.628	7.4	5.140	60.6	0.998	11.7	1.713	20.2	8.479	100
1971	0.768	8.8	5.106	59.0	1.067	12.3	1.699	19.3	8.640	100
1972	1.005	9.9	5.822	57.6	1.253	12.4	2.019	19.9	10.099	100
1973	1.039	9.3	6.384	57.1	1.301	11.6	2.444	22.0	11.168	100
1974	1.006	7.6	8.071	61.1	1.553	11.7	2.580	19.5	13.200	100
1975	1.041	5.8	10.034	56.6	2.354	13.2	4.288	24.2	17.717	100
1976	1.194	5.9	11.473	56.9	2.957	14.6	4.509	22.3	20.133	100
1977	1.318	4.4	14.419	56.6	3.053	12.0	6.646	26.1	25.436	100
1978	2.328	7.7	16.750	55.9	3.073	10.2	7.775	25.9	29.426	100
1979	2.972	7.4	23.394	59.0	4.002	10.0	9.277	23.4	39.645	100

*1966 nine months only

Source: (i) See sources to Table (2)

(ii) Ministry of Finance, Annual Reports, various Issues.

TABLE (11) Rates of Growth of Government Current and Capital Expenditure 1954-79

(percentage)

Year	Annual Rate of Growth of		Year	Annual Rate of Growth of	
	Current Exp.	Capital Exp.		Current Exp.	Capital Exp.
1954	5.7	16.0	1967	58.1	126.8
1955	11.5	-14.4	1968	28.1	-6.9
1956	22.8	10.9	1969	14.1	-7.0
1957	7.1	40.4	1970	-9.5	-6.3
1958	20.3	35.3	1971	2.8	3.5
1959	10.1	-17.6	1972	15.8	54.0
1960	3.7	24.7	1973	11.8	18.3
1961	4.1	-17.4	1974	31.8	5.2
1962	6.7	53.9	1975	21.3	84.0
1963	20.9	-19.0	1926	47.9	-3.3
1964	3.8	48.9	1977	5.2	85.7
1965	3.9	22.0	1978	7.9	-14.5
1966	-21.1	-7.3	1979	38.1	67.8
Average 1954-56	7.6	13.6	Average 1967-79	21.0	31.3

Source : Appendix table (9)

TABLE (12) Total Government Revenues by major components 1954-1979

(in millions of JD's)

Year	Foreign* Revenues	Domestic Revenues				Total Domestic Revenue	Total Revenues	N^a
		Indirect Taxes	Direct Taxes	Tax Revenues	Non-tax Revenues			
1954	15.7	4.9	0.8	4.8	2.7	7.5	23.2	18.4
1955	15.5	4.8	0.9	5.7	2.3	8.0	23.5	17.9
1956	17.0	4.9	1.1	6.0	2.7	8.7	25.7	19.7
1957	11.2	5.8	1.2	7.0	12.2	19.2	30.7	23.4
1958	24.5	6.7	1.0	7.7	3.6	11.3	30.4	27.7
1959	23.8	8.4	1.2	9.6	3.7	13.3	35.8	27.5
1960	23.4	9.3	1.3	10.6	3.3	13.9	37.1	26.7
1961	24.1	10.0	1.5	11.5	3.2	14.7	38.8	27.3
1962	23.0	10.9	1.8	12.7	8.4	21.1	44.2	31.4
1963	22.5	12.2	2.0	14.2	5.1	19.3	41.8	27.6
1964	27.8	13.9	2.0	15.9	7.9	23.8	51.6	35.6
1965	23.9	18.0	2.5	20.5	6.2	26.7	50.6	35.7
1966	17.7	15.6	2.0	17.6	5.4	23.0	40.7	30.1
1967	44.92	16.08	2.16	18.24	7.26	25.5	70.4	23.1
1968	45.65	17.27	1.99	19.26	7.11	26.4	72.0	56.8
1969	43.86	20.71	2.49	23.20	9.44	32.6	76.5	58.3
1970	38.34	18.63	2.69	21.32	8.75	30.11	68.4	52.7
1971	43.40	20.02	3.12	23.14	12.45	35.6	79.0	65.4
1972	52.84	24.03	3.54	27.53	14.81	42.4	95.2	81.6
1973	57.06	29.90	4.12	34.02	12.06	46.1	103.1	85.6
1974	74.03	37.15	5.89	43.04	22.17	65.2	139.2	106.0
1975	116.76	48.22	9.36	57.58	24.48	82.1	198.8	150.4
1976	86.12	76.91	9.43	86.34	18.52	104.9	191.0	121.6
1977	180.71	102.04	13.30	115.39	24.51	139.9	320.6	220.2
1978	148.00	107.76	21.90	129.66	34.14	163.8	311.8	211.7
1979	257.92	118.95	25.90	144.85	37.05	181.9	439.8	322.3

*Includes, budget support, Econ. and Tech. Assistance, and Foreign Loans.

N^a = Foreign Revenues and Non-Tax Revenues

Sources: (i) Ministry of Finance, Annual Reports, Relevant Issues.

(ii) Central Bank of Jordan, Annual Reports, Relevant Issues.

(iii) Central Bank of Jordan, Monthly Statistical Bulletin, (Sept. 1980).

Table (13) Total Indirect Taxes by Major Source, 1954-1979 (in million of JD's).

Year	Customs Duties	Excise Taxes	Licences	Fees	Additional Tax	Total Indirect Taxes
1954	2.721	0.242	0.365	0.522	0.096	3.946
1955	3.169	0.267	0.445	0.534	0.365	4.780
1956	3.187	0.307	0.466	0.539	0.403	4.902
1957	3.880	0.326	0.516	0.644	0.462	5.828
1958	3.968	0.355	0.279	1.606	0.480	6.687
1959	5.093	0.424	0.320	1.985	0.575	8.397
1960	4.939	0.623	0.849	2.104	0.768	9.283
1961	4.530	1.487	0.866	2.075	1.001	9.959
1962	4.894	1.474	0.942	2.328	1.299	10.937
1963	5.047	2.123	1.034	2.577	2.441	12.222
1964	6.058	2.513	1.055	2.764	2.483	13.873
1965	8.709	3.746	1.481	2.596	1.479	18.007
1966	8.186	3.468	1.260	1.751	1.300	15.965
1967	8.003	4.361	1.010	1.814	0.888	16.076
1968	8.679	4.380	1.410	1.497	1.304	17.220
1969	10.439	6.009	2.042	1.570	0.422	20.482
1970	8.906	5.094	1.876	1.540	1.353	18.769
1971	7.463	6.872	2.132	2.211	1.507	20.185
1972	9.263	7.780	2.749	2.791	1.920	24.503
1973	11.871	7.860	3.606	3.973	2.300	29.610
1974	16.414	8.985	4.975	4.120	2.900	37.394
1975	20.680	10.657	5.910	7.668	3.646	49.287
1976	39.733	9.097	10.605	12.664	5.286	77.385
1977	63.995	9.103	12.517	10.980	6.324	102.919
1978	67.800	10.200	13.400	10.660	5.700	107.760
1979	71.200	11.200	16.250	13.300	7.000	118.950

Sources: (i) Ministry of Finance, Annual Reports, various issues

(ii) Central Bank of Jordan, Monthly Statistical Bulletin, various issues.

Table (14) Sources of Total Foreign Debt, 1969-1979
(in millions of JD's)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Grand Total	39.9	41.8	49.6	61.2	68.3	79.8	108.0	132.6	193.1	244.1	306.3
A. Gov. Debt	39.9	41.8	44.1	56.1	63.3	71.3	91.7	114.2	146.0	187.8	233.7
1. Foreign Govs	31.0	35.5	38.6	49.3	55.2	61.1	77.9	97.4	122.9	149.1	186.8
2. Inter. & Regional Lending Inst.	6.6	3.2	3.4	4.5	5.9	7.1	10.8	14.7	17.1	20.1	25.3
3. Foreign Banks & Comm. Cos.	2.3	3.0	2.7	2.3	3.2	3.1	2.9	2.0	6.0	18.0	21.6
B. Gov. Guaranteed Debt	-	0.03	5.5	5.1	5.0	8.5	16.3	18.4	47.1	56.1	72.5
1. Foreign Gov.	-	0.03	-	-	0.1	5.9	6.3	6.8	7.0	7.5	8.0
2. Inter. & Regional Lending Inst.	-	-	0.3	0.3	0.5	-	-	-	-	-	8.7
3. Foreign Banks of Comm. Cos.	-	-	5.2	4.8	4.4	2.6	10.0	11.4	40.0	49.0	55.8

Source : CBJ, Monthly Statistical Bulletin, vol. 17, No.5, May 1981; vol. 11, No. 4, April 1975; and vol. 15, No. 10, Oct. 1979.

Table (15) Data on the Dependant and Independant variables used in the Model for the Determinants of Taxable Capacity in Jordan, 1954-1979.

Year	$\frac{TR}{Y}$	$\frac{Y}{P}$	$\frac{M}{Y}$	$\frac{F}{Y}$	$\frac{I}{Y}$	$\frac{Q}{Y}$	$\frac{\Delta N}{N}$	$\frac{A}{Y}$	$\frac{\Delta P}{P}$	D
1954	13.2	37.7	37.8	29.9	8.0	34.7	3.0	27.0	-	0.0
1955	16.1	34.6	53.8	31.1	10.4	41.4	3.6	12.4	-	0.0
1956	12.7	46.3	38.2	24.8	9.2	33.6	2.8	27.7	-	0.0
1957	27.4	45.8	46.2	16.0	9.7	36.7	3.4	18.3	-	0.0
1958	14.7	48.8	47.6	31.8	9.9	36.3	3.3	16.7	-	0.0
1959	13.4	60.4	43.5	24.0	8.7	29.3	3.7	10.6	-	0.0
1960	13.2	62.5	44.6	22.1	6.5	29.3	3.0	13.8	-	0.0
1961	11.6	74.3	36.7	19.0	6.9	28.0	1.2	19.9	-	0.0
1962	16.1	73.9	39.6	17.6	6.2	32.9	3.5	16.0	-	0.0
1963	11.1	75.6	35.1	12.9	6.1	27.6	2.8	12.7	-	0.0
1964	14.8	85.4	35.3	17.3	7.8	33.3	3.3	21.2	-	0.0
1965	14.8	92.6	53.2	13.2	9.0	35.6	3.7	18.9	-	0.0
1966	12.4	92.4	41.3	9.5	9.3	40.8	3.1	14.9	-	0.0
1967	17.9	130.3	42.0	31.5	9.4	58.6	0.5	16.4	0.0	1.0
1968	15.9	147.8	44.2	27.5	9.7	65.4	3.7	9.7	3.0	1.0
1969	16.5	123.4	49.5	22.2	9.4	60.1	0.4	11.4	8.0	1.0
1970	16.1	112.1	41.1	20.4	8.5	69.0	4.3	8.3	6.0	1.0
1971	17.9	115.7	44.6	21.8	8.2	68.1	3.3	12.0	4.0	1.0
1972	19.2	124.6	53.3	23.9	8.4	66.2	3.0	12.0	9.0	1.0
1973	19.1	131.9	56.5	23.6	4.1	72.9	3.2	7.3	10.0	1.0
1974	23.3	147.8	70.2	26.5	10.9	77.6	3.2	10.8	20.0	1.0
1975	24.0	180.3	68.3	34.0	13.7	81.0	0.5	7.6	13.1	1.0
1976	19.3	268.6	62.6	15.9	13.4	66.1	6.3	6.9	11.5	1.0
1977	22.5	292.7	72.9	29.0	13.6	70.4	5.4	6.7	14.5	1.0
1978	22.9	324.9	62.2	20.7	11.8	83.6	3.2	7.1	6.9	1.0
1979	23.9	376.2	69.1	30.2	13.0	89.5	3.2	5.6	14.2	1.0

Note : For the variables codes see text.

Sources : (i) Central Bank of Jordan, Monthly Statistical Bulletin, vol. 16, No. 10 (Oct. 1980).

(ii) IMF, International Financial Statistics, various issues.

(iii) Central Bank of Jordan, Annual Report, various issues.

(iv) Department of Statistics, National Accounts for Jordan, 1952-1976.

Table 16 Regression Results : Determinants of Central Government Total Domestic Revenue, 1954-1979

Type of Equation	Dependant variable	Inter-cept	Y_P	M_Y	F_Y	Q_Y	$(\frac{\Delta N}{N})$	I_Y	A_Y	R^2	DW	DF	No.of Equa.
Linear	$\frac{T_R}{Y}$	13.56	0.029 (3.77)							0.37	1.89	24	1
Log-log	Log $\frac{T_R}{Y}$	1.78	0.22 (3.59)							0.35	1.80	24	1.a
Semi-log	$\frac{T_R}{Y}$	-0.34	3.81 (3.36)							0.32	1.75	24	1.b
Linear	$\frac{T_R}{Y}$	3.75	0.004 (0.46)	0.26 (3.39)						0.58	2.26	23	2
Log-log	log $\frac{T_R}{Y}$	-0.37	0.04 (0.66)	0.77 (3.99)						0.62	2.30	23	2.a
Semi-log	$\frac{T_R}{Y}$	-38.47	0.62 (0.51)	13.63 (3.81)						0.58	2.26	23	2.b
Linear	$\frac{T_R}{Y}$	3.70	0.005 (0.45)	0.25 (3.03)	0.005 (0.05)					0.58	2.26	22	3
Log-log	log $\frac{T_R}{Y}$	-0.42	0.05 (0.77)	0.72 (3.34)	0.07 (0.58)					0.62	2.35	22	3.a
Semi-log	$\frac{T_R}{Y}$	-38.86	0.71 (0.55)	13.16 (3.28)	0.59 (0.28)					0.58	2.28	22	3.b
Linear	$\frac{T_R}{Y}$	3.63	-0.007 (-0.60)	0.22 (2.57)	-0.047 (-0.46)	0.09 (1.72)				0.63	2.26	21	4
Log-log	log $\frac{T_R}{Y}$	-0.28	-0.08 (-0.90)	0.59 (2.82)	-0.04 (-0.36)	0.34 (2.13)				0.69	2.41	21	4.a
Semi-log	$\frac{T_R}{Y}$	-36.80	-1.36 (-0.78)	11.17 (2.77)	-1.05 (-0.47)	5.23 (1.73)				0.64	2.26	21	4.b

Table 16 (Continued)

Type of Equation	Dependant variable	Inter-cept	Y_P	M_Y	F_Y	Q_Y	$(\frac{\Delta N}{N})$	I_Y	A_Y	R^2	DW	DF	No.of Equa.
Linear	$\frac{T_R}{Y}$	4.09	-0.007 (-0.53)	0.22 (2.48)	-0.056 (-0.52)	0.088 (1.56)	-0.15 (-0.13)			0.63	2.24	20	5
Log-log	log $\frac{T_R}{Y}$	-0.28	-0.082 (-0.89)	0.60 (2.70)	-0.05 (-0.38)	0.34 (2.07)	-0.006 (-0.14)			0.69	2.40	20	5.a
Semi-log	$\frac{T_R}{Y}$	-36.74	-1.40 (-0.79)	11.47 (2.69)	-1.23 (-0.52)	5.18 (1.64)	-0.25 (-0.28)			0.64	2.23	20	5.b
Linear	$\frac{T_R}{Y}$	0.91		0.20 (1.99)	-0.07 (-0.64)	0.09 (1.75)	-0.15 (-0.30)	0.16 (0.43)	0.14) (0.84)	0.65	2.41	19	6
Log-log	log $\frac{T_R}{Y}$	-1.16		0.61 (2.36)	-0.016 (-0.15)	0.32 (2.24)	0.007 (0.16)	0.03 (0.21)	0.13 (1.05)	0.70	2.50	19	6.a
Semi-log	$\frac{T_R}{Y}$	-50.99		11.38 (2.28)	-0.75 (-0.35)	4.81 (1.75)	-0.002 (0.00)	0.97 (0.35)	2.23 (0.91)	0.65	2.33	19	6.b
Linear	$\frac{T_R}{Y}$	-0.18	-0.006 (-0.48)	0.20 (1.92)		0.10 (1.68)	0.0009 (0.00)	0.19 (0.49)	0.10 (0.63)	0.65	2.44	19	7
Log-log	log $\frac{T_R}{Y}$	-0.95	-0.055 (-0.51)	0.615 (2.32)	-0.046 (-0.36)	0.37 (2.13)	0.002 (0.06)	0.048 (0.32)	0.101 (0.69)	0.70	2.44	18	7.a
Semi-log	$\frac{T_R}{Y}$	-47.18	-1.006 (-0.48)	11.42 (2.24)	-1.29 (-0.52)	5.668 (1.71)	-0.089 (-0.09)	1.29 (0.44)	1.62 (0.58)	0.65	2.27	18	7.b

Note : For the code to the variables see text.

Table 17 Regression Results : Determinants of Central Government Total Domestic Revenue, 1967-1979. (East Bank Only)

Type of Equation	Dependant variable	Inter-cept	Y_P	M_Y	F_Y	Q_Y	$(\frac{\Delta N}{N})$	I_Y	A_Y	R^2	DW	DF	No.of Equa.
Linear	$\frac{T_R}{Y}$	15.64	0.02 (2.98)							0.45	1.26	11	1
Log-log	log $\frac{T_R}{Y}$	1.71	0.245 (3.17)							0.48	1.27	11	1.a
Semi-log	$\frac{T_R}{Y}$	-5.30	4.88 (3.19)							0.48	1.35	11	1.b
Linear	$\frac{T_R}{Y}$	6.66	6.002 (0.48)	0.22 (4.85)						0.83	1.92	10	2
Log-log	log $\frac{T_R}{Y}$	0.34	0.026 (0.38)	0.62 (4.45)						0.82	1.86	10	2.a
Semi-log	$\frac{T_R}{Y}$	-32.27	0.58 (0.43)	(12.23) (4.34)						0.81	1.92	10	2.b
Linear	$\frac{T_R}{Y}$	4.52	0.004 (0.78)	0.20 (4.55)	0.12 (1.68)					0.87	1.99	9	3
Log-log	log $\frac{T_R}{Y}$	-0.02	0.04 (0.66)	0.57 (4.30)	0.15 (1.69)					0.87	1.92	9	3.a
Semi-log	$\frac{T_R}{Y}$	-40.18	0.92 (0.75)	11.06 (4.28)	3.37 (1.90)					0.87	1.98	9	3.b
Linear	$\frac{T_R}{Y}$	-0.28	-0.0001 (-0.03)	0.16 (4.35)	0.098 (1.67)	0.117				0.93	2.34	8	4
Log-log	log $\frac{T_R}{Y}$	-0.95	0.01 (0.19)	0.47 (3.74)	0.127 (1.60)	0.37 (2.03)				0.91	2.19	8	4.a
Semi-log	$\frac{T_R}{Y}$	-06.45 —	0.25 (0.25)	8.83 (3.86)	2.79 (1.92)	8.11 (2.40)				0.93	2.32	8	4.b

Table 17 (continued)

Type of Equation	Dependant variable	Inter-cept	Y_P	M_Y	F_Y	Q_Y	$(\frac{\Delta N}{N})$	I_Y	A_Y	R^2	DW	DF	No.of Equa.
Linear	$\frac{T_R}{Y}$	1.28	0.001 (0.29)	0.17 (4.47)	0.05 (0.76)	0.10 (2.31)	-0.22 (-1.01)			0.94	1.90	7	5
Log-log	log $\frac{T_R}{Y}$	-0.99	0.017 (0.29)	0.47 (3.59)	0.09 (0.94)	0.41 (2.07)	-0.01 (-0.70)			0.92	1.90	7	5.a
Semi-log	$\frac{T_R}{Y}$	-61.27	0.40 (0.38)	8.76 (3.76)	2.02 (1.16)	8.84 (2.49)	-0.33 (-0.84)			0.93	2.03	7	5.b
Linear	$\frac{T_R}{Y}$	-7.81		0.18 (6.22)	0.02 (0.41)	0.177 (4.85)	-0.0007 (-0.00)	0.085 (0.91)	0.34 (2.87)	0.98	2.11	6	6
Log-log	log $\frac{T_R}{Y}$	-2.26		0.52 (4.98)	0.048 (0.58)	0.60 (3.30)	-0.002 (-0.16)	0.036 (0.74)	0.15 (1.98)	0.95	1.77	6	6.a
Semi-log	$\frac{T_R}{Y}$	-84.48		9.67 (5.37)	1.20 (0.85)	12.55 (3.99)	-0.095 (-0.095)	0.95 (1.14)	2.26 (2.10)	0.96	1.81	6	6.b
Linear	$\frac{T_R}{Y}$	-7.32	0.0016 (0.40)	0.18 (6.45)		0.17 (4.49)	-0.046 (-0.31)	0.067 (0.60)	0.35 (3.10)	0.97	2.19	6	7
Log-log	log $\frac{T_R}{Y}$	-2.54	0.08 (1.22)	0.48 (4.69)	0.046 (0.58)	0.59 (3.40)	-0.005 (-0.31)	-0.009 (-0.16)	0.20 (2.39)	0.96	1.88	5	7.a
Semi-log	$\frac{T_R}{Y}$	-89.00	1.34 (1.13)	9.14 (5.02)	1.17 (0.85)	12.46 (4.05)	-0.13 (-0.44)	0.21 (0.20)	3.64 (2.42)	0.97	1.92	5	7.b

Note : For the codes of the variables see text.